MEDICAL RECORD

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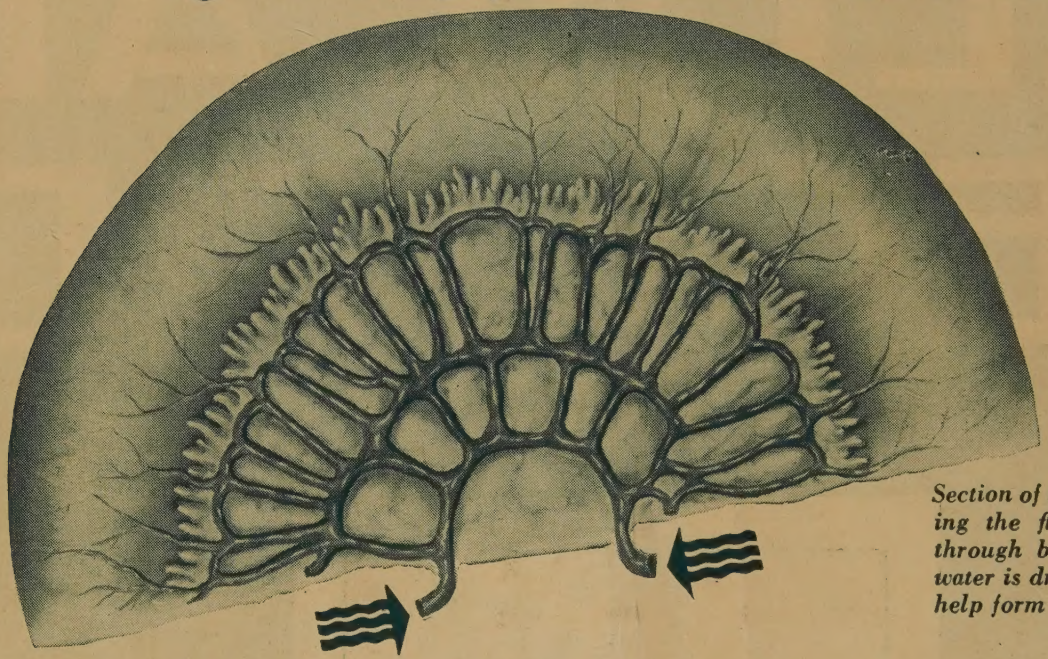
IN science, a ~~law~~ is not a rule imposed from without, but an expression of an intrinsic process.

—Clifford Allbutt

MAY 1946

Vol. 159, No. 5

PHYSICIANS PREFER *Gentle Pressure* IN LAXATION



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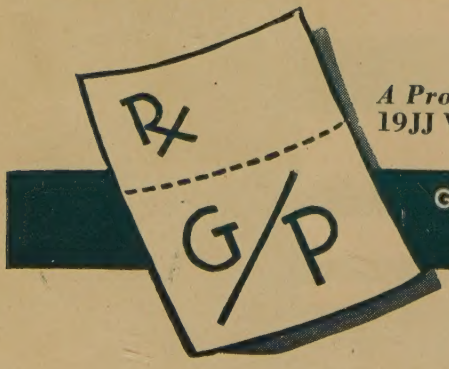

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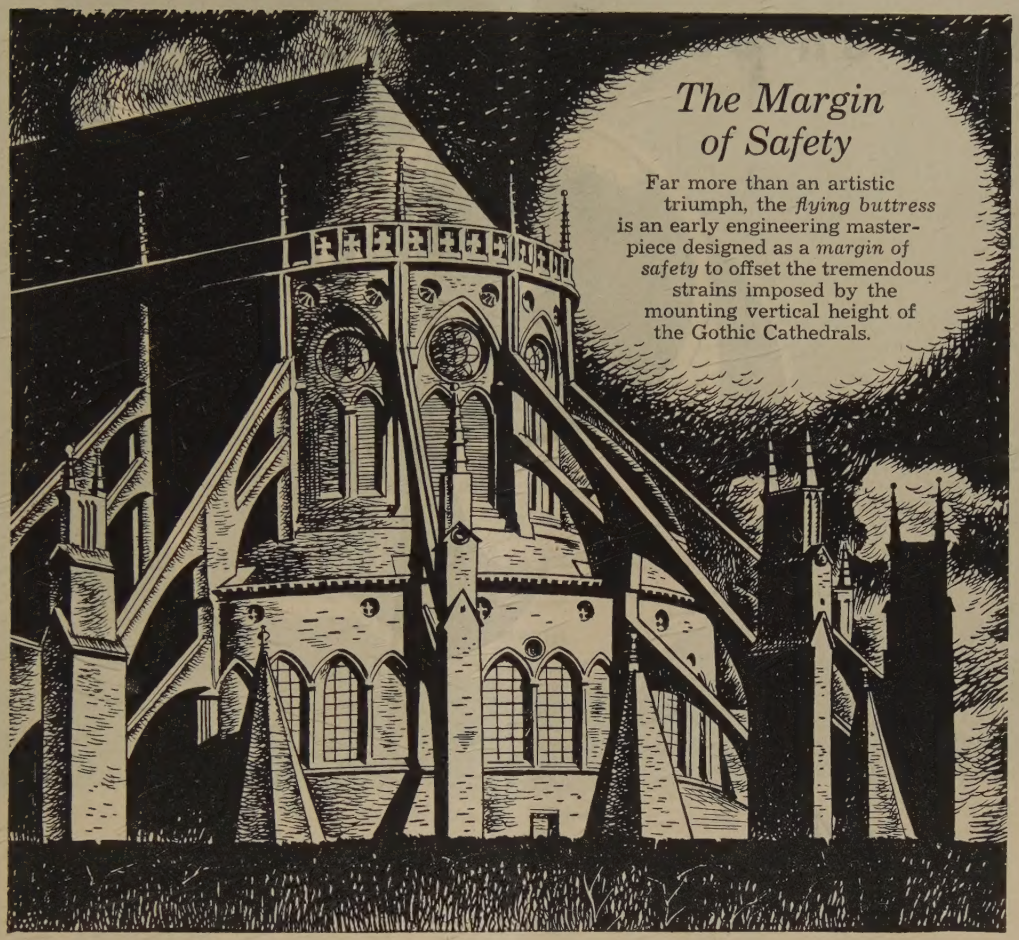
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Far more than an artistic triumph, the flying buttress is an early engineering masterpiece designed as a margin of safety to offset the tremendous strains imposed by the mounting vertical height of the Gothic Cathedrals.

There is a margin of safety, too, well beyond optimal needs, in Vi-teens Homogenized Vitamins (especially palatable in milk, water, or formula) and in Vi-teens Super Potency tablets.

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1 Milligram	Vitamin B_1 (Thiamin HCL) (2666 U.S.P. Units)	8 Milligrams
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4 Milligrams	Niacinamide (Nicotinamide)	30 Milligrams
———	Pyridoxine (B_6)	2 Milligrams
40 Milligrams	Vitamin C (1500 U.S.P. Units)	75 Milligrams
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MAY 1946

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*Greene, R. R.; Int. Abst. Surg. 74: 595, 1942

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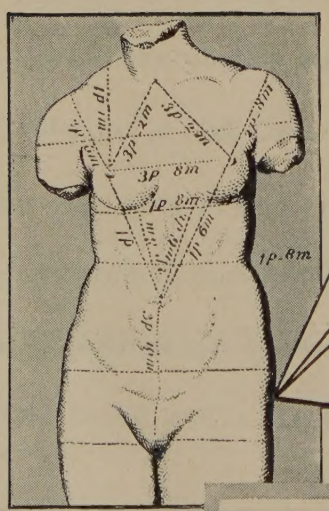

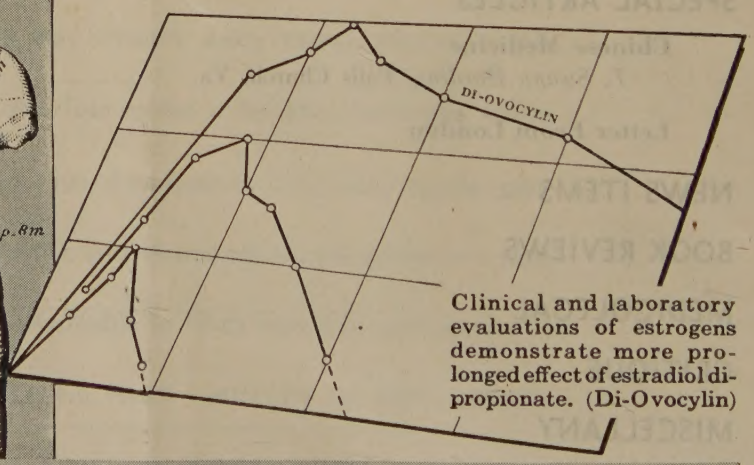

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Prospects of Controlling Cancer

Dr. Morton L. Levin, director of cancer control, New York State Department of Health, in an address delivered in Providence, R.I. (*Health News,* April 1, 1946), said that a realistic appraisal of the prospects of controlling cancer was desirable for at least two reasons: first, to help guide the plan of attack on cancer; and, second, and equally important, to show to what extent the prospects of controlling cancer depend on the non-medical public.

Cancer control, he stated, was a matter of self-preservation, first for the two hundred thousand persons who will receive initial treatment for this disease in the next twelve months; and, second, for the twenty million persons living today who would develop cancer at some future time. The problem was how to mobilize our energies to a degree commensurate with actualities at a time when it will do the most good.

Discussing the implications of maximum control of cancer from the viewpoint of prevention, Dr. Levin said it would mean that every person in the country would receive frequent, thorough examinations for the detection of any one of the conditions which, while not actually cancerous, indicate to some extent an increased hazard of developing cancer. He pointed out that making such examinations presented difficulties, not only in obtaining the professional personnel and the large sums of money required for the periodical health examinations of these individuals, but in persuading everyone over forty to undergo an examination. This is a perfectly reasonable goal but it will not be reached in many years unless the public supports the efforts of the medical profession to achieve it.

The second great field in which maximum effort was indicated was in the diagnosis and treatment of cancer after it had developed. This had two main aspects, one concerning the patient, the other the physician. The great majority of people have yet to be reached with the simple, basic facts about early cancer, its early symptoms, and the necessity for prompt diagnosis. With respect to the physician, ways should be found of making more readily available the equipment and the special skills that are found in the large medical centers. The training of more physicians in the fields of surgery, radiation therapy and pathological diagnosis is another immediate goal, the attainment of which will depend largely on the medical schools and the centers of cancer treatment in this country. The early diagnosis and the prompt treatment of the most common forms of cancer rest largely on the general practitioner and general surgeon. The great hope of cancer research, Dr. Levin said, lies in the discovery of more effective treatments for cancer—some chemical, radiation or other agent, that will attack the cancer cell as the newer chemotherapeutic agents attack many of the bacterial cells which cause disease.

In closing, Dr. Levin expressed the belief that all methods of controlling cancer would some day be fully utilized because all the best impulses of mankind are working in that direction.

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Open Forum

The Chinese Way in Medicine

T. SWANN HARDING
Falls Church, Va.

In his Herbert Spencer address, delivered June 1933, Albert Einstein remarked that the older physics of Newton and Galileo had to be changed when it was discovered that an entirely new system of physics, based upon an entirely different set of initial axioms assumed true, applied quite as well to the reality man knows, as did the old absolutist system with its axioms supposedly derived from experience.

Where you come out in any science depends altogether upon where you start. Formerly it used to be supposed that science was based upon axiomatic truths derived from experience. Today it is held that these basic axioms, always assumed true without proof, cannot be proved and have been selected merely as the foundation upon which to erect the structure of the science. Of course if the finished structure doesn't correspond with nature sufficiently well it is demolished. Then a new science is reared on new axioms.

It is thus also that we of the western world have reared the structure of something called the science of medicine. But the Chinese have developed a wholly different system of medicine, derived from quite other axioms than those which underlie western medical science.

It is, therefore, wrong to regard this medical system as wholly whimsical for perhaps it is just the kind of a science of medicine that a people, differing so markedly from us in philosophy and outlook on life as the Chinese, should have. It is based on the theory that the cosmos arose out of the cooperation of the Yang or male and the Yin or female principle, an axiom as difficult to prove as to deny. Maybe it did; who knows?

If this be granted, then health depends upon the equilibrium and harmony of the male and female principles, and any married man will agree at that point. There must also be an even balance between weakness and strength, heat and cold, dryness and moisture. Each principle should have government of six of man's twelve fundamental organs. When Yang predominates there is excitement, but Yin as certainly brings depression.

According to the wise Chinese, man's five main organs correspond to the five elements, the five stars, the five colors, and the five sensations of taste in the following orderly manner:

Stomach, Saturn, earth, yellow, sweet
Liver, Jupiter, wood, green, sour
Heart, Mars, fire, red, bitter
Lungs, Venus, metal, white, sharp or biting
Kidneys, Mercury, water, black, salt.

It is not difficult to see that the Chinese physician's work is well cut out for him.

According to Chinese medicine the chief organ is the heart which, together with the stomach, originates thought. But the stomach is also the primary organ of respiration, while the lungs expel humors, the gallbladder purifies the body fluids and is the seat of courage, and the liver is the seat of sensations. The brain and the spinal marrow produce semen while the right kidney is the seat of the sexual functions.

The pulse infallibly indicates all bodily disturbances in harmony. It varies also with age, sex, emotions, seasons, and hour of the day and then, to complicate matters, occurs in fifty-seven varieties. It takes about two years to master the art of Chinese pulse feeling, and then one may wonder whether this was time well spent.

The outward state of the patient is also of significance to the Chinese doctor. The condition of the tip of his nose infallibly indicates that of his stomach, making an exploratory operation superfluous. The lobe of his ears indicates the condition of his kidneys; the tongue, the breath, the taste, and the urine must all be examined closely.

Most Chinese remedies are of plant origin. Gelatine made from asses' skin and orange peel and compounded with salt, vinegar, and urine is the remedy for tuberculosis. Diseases of the kidney, however, are treated with pig kidneys. Hemorrhoids, which Napoleon had and wrote his brother Jerome that he treated successfully with leeches, the Chinese cure with a simple mixture of gentian, aconite, ginger, nelumbo, gypsum, borax, powdered rhinoceros horn, burnt hair, and garlic. Nelumbo is probably water lily to you.

Powdered dragon's bones, easily procured in China, will stop nosebleed; however, this remedy is said frequently to be adulterated. The Chinese have vaccinated with scabs for smallpox since the tenth century, holding that the infection is spread from the pustules by the wind. Malaria is treated with magnolia, boiled tortoise heads, buffalo cheese, and iron oxide.

Syphilis has been treated with mercury in China since the tenth century, calomel or the sublimate being used. Diphtheria is treated by blowing an astringent powder into the sufferer's throat and then going home before he blows it back at you. Licorice and rhubarb are common Chinese remedies, cubebs are used for gonorrhea and asparagus as a diuretic.

The penis of deers, asses, seals, and sheep; human placenta; compounds of licorice and human feces; wombs of deer; bones of tigers; soot from old ovens; fossil ivory; the spleens and livers of executed criminals; and various insects all have their place in Chinese therapy and pharmacy. There are also special remedies called Thunder Pills, Opium-Weaning Grease, Sure Remedy, Robust-the-Whole-Year and others with a patent medicine tang. Soup made from black cats prevents and cures burns from hot metals.

That about ends the present lesson on Chinese medicine.

Russian Rehabilitation Program

The results of the German occupation are seen most clearly in the broken and maimed bodies of millions of Soviet citizens. The immediate post-war period has produced another battle for survival in the land that suffered most at the hands of the Nazis—a land in which 40,000 hospitals, 976 sanatoriums and 656 rest homes were demolished. It is a battle to save and rehabilitate the health of a people plagued by the destruction and cruelty of the invaders and to prevent a repetition of the epidemics and scourges of deathly disease that swept the Soviet Union after World War I.

To cite a few of the statistics . . . fifteen million casualties in the war against the Axis . . . one million

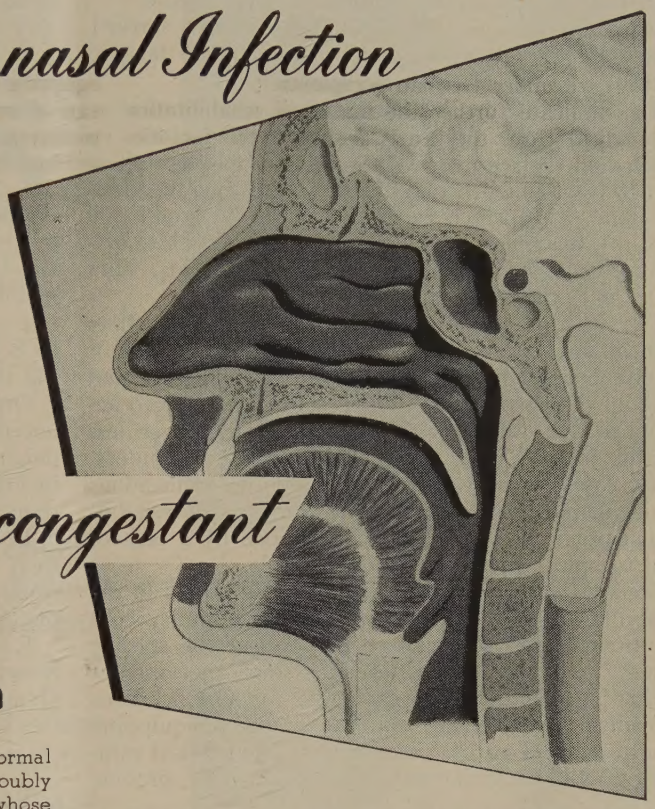
In treating Para-nasal Infection

support nature's own first line of defense . . . with

ARGYROL

Bacteriostatic Decongestant

without rebound action



Your main purpose, of course, is to restore normal function in the nasal passages. This is made doubly difficult with the use of vasoconstrictors whose action is frequently followed by compensatory congestion thus creating a vicious circle.

Avoid that vicious circle . . . with ARGYROL

ARGYROL is the natural, the obvious choice of the discriminating practitioner, because the cleansing, demulcent and bacteriostatic actions of ARGYROL *aid the natural defense mechanism* without disturbing the normal physiology of the mucous membranes.

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1. ARGYROL is decongestive, without irritation to the membrane, and without ciliary injury.
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amputation cases . . . one million Soviet youngsters with severe cases of rickets and other diseases of malnutrition . . . twenty-five million without shelter . . . four million orphans . . . and countless millions starved, mistreated and ill as a result of a complete lack of medical care under German occupation.

To complicate further the matter of rehabilitation and medical care, the Nazis destroyed the factories which could replace many of the facilities they left in ruin. They demolished 31,850 industrial enterprises, including many which were devoted to the production of x ray machines, stethoscopes, prosthetic aids, laboratory and operating equipment, hearing aids, sulfa drugs and other medicaments.

The task is tremendous. Not only is immediate medical and surgical care required by millions, but simultaneously the Russians have to reconstruct and re-equip the hospitals and institutions necessary to accomplish this. Added to this, is the slower but no less painful job of rehabilitating millions of amputees, shock cases, war deaf and blind. While tremendous strides in reconstruction have been made, the rehabilitation program is seriously handicapped by a lack of vital technical equipment and materials.

Feeling that the American people want to aid in the rehabilitation of the Russians through voluntary contributions of we American people, and at the specific request of Soviet authorities, Russian Relief is now conducting a nation-wide campaign for specific items of medical and surgical supplies, for the re-equipping of hospitals and medical institutions. The medical campaign of Russian Relief will, to a great extent, provide the tools for this vast task of rehabilitation. Another important segment of this undertaking is a project to bring back to normal useful life the million soldiers and civilians suffering from the loss of one or more limbs. This million-dollar project provides for the equipping of a network of hospitals specializing in the care of amputees and a central factory with regional workshops in various Soviet Republics to manufacture artificial limbs.

Leading Soviet authorities, headed by Professor Nikolai N. Priorov, director of the Central Institute of Orthopedics and Traumatology in Moscow, visited the United States last year and found that American manufacturers were unable to cope with the tremendous need for artificial limbs and so they have turned to Russian Relief as the only agency capable of helping them.

Organizations, individuals and communities throughout the country, are urged to contribute to the campaign by raising funds for specific items of equipment included in the list of most urgently needed supplies requested by Soviet officials.

In addition, the Soviet officials have indicated where each item of equipment will be used to further the cause of friendship, and will have attached to it a brass plaque carrying the name of the donor.

Russian Relief's headquarters are located at 5 Cedar Street, New York 5, N.Y. Further details on this program of medical rehabilitation will be sent on request.

Norrisa Thompson
American Society for Russian Relief
P.O. Box 135, New York 5, N.Y.

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or that occurring as a result of a neurosis or reflexly from relapsed kidney or uterine misplacement

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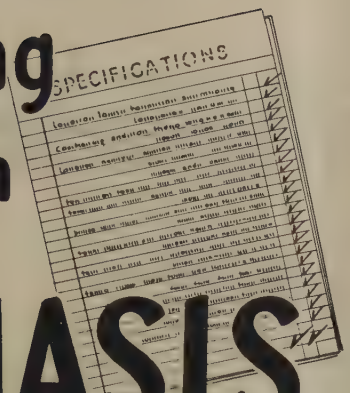

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SPECIAL NOTICE

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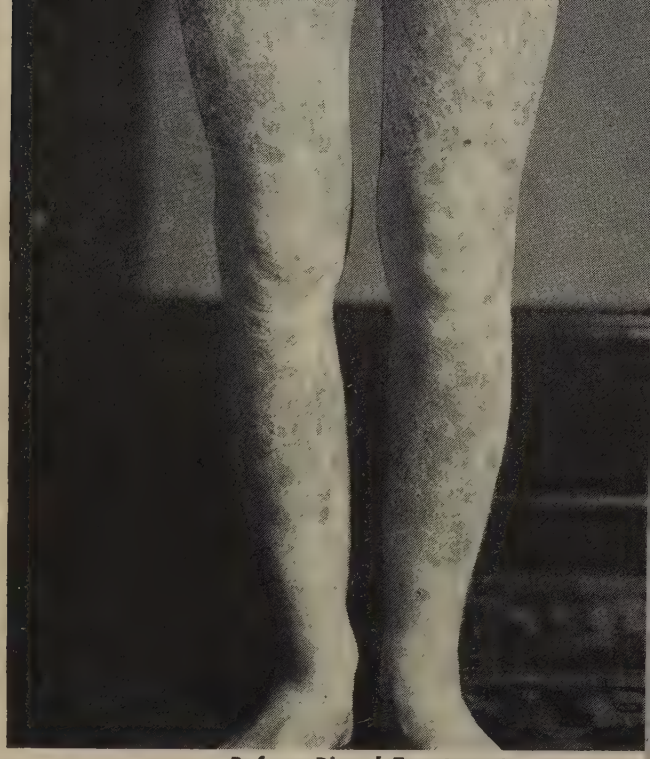

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RIASOL for PSORIASIS

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Ivy Poisoning · Sunburn
Localized Vesicular Areas

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If you wish to try CALAMATUM for yourself, your name and address will bring a sample tube with our compliments.

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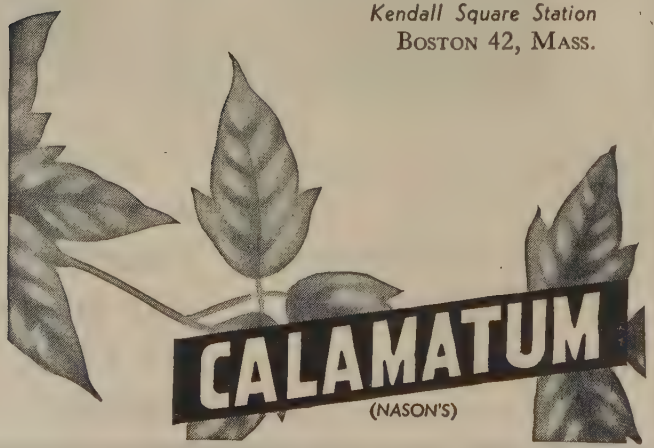

What Can a County Medical Society Do With An Extra $500 Annually?

To the Editor.—

A few years ago a member of the Adams County Medical Society of Illinois (membership of sixty) set up an irrevocable trust (Foundation) for his Society and has since contributed to it so that the income is now over $600 annually. The principal must be held intact, and not to exceed eighty percent of the income may be expended annually so the Foundation will naturally grow. The Trustees are empowered to use the funds "to sponsor or undertake one or more things of a charitable, scientific, literary or educational nature" and "which will bring public and professional honor and respect to the medical profession." The Trustees know of no other Foundation that has been set up like this one *and are very desirous to secure counsel.*

I shall be glad to furnish further particulars relating to the Foundation to any one who is interested, and any suggestions regarding the Society's future activities may be sent to me.

FRANK MCREYNOLDS, M.D.
President, Swanburg Medical Foundation
1101 Maine Street, Quincy, Ill.

Otitis Media

To the Editor.—

I have on my desk a copy of a journal, "The MEDICAL RECORD" for December, 1945. In an editorial on page 743, which is written about otitis media, there is the following sentence:

"Incision of the drum is harmless and ought to be carried out immediately if there is redness and any bulging of the drum."

This seems to me a startlingly definite and broad statement to be made, particularly to appear in an editorial column where such things carry unusually great weight. I think it is a dangerous statement to make, because exactly this has been carried out as a procedure by many physicians and many ear-drums have been unnecessarily operated upon.

James L. Wilson, M.D.
University of Michigan
Ann Arbor, Mich.

Position Wanted

To the Editor.—

I am a veteran, back from overseas service.

I am a physician, am unable to find an office, and have no funds to keep me and my family while waiting.

I possess a thorough command of the following foreign languages: French, German, Polish and Russian.

I want to find work on a medical journal as a reviewer of foreign medical literature. There is a growing necessity to acquaint the American medical professional with the accomplishments and experiments of the Soviet doctors and research workers. I have followed the Soviet medical literature for many years and consider myself well qualified as a reviewer of the Russian (and Ukranian, Bielorussian, Polish) medical periodicals.

Emanuel Patt, M.D.
2515 Olinville Avenue
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THYROBROM may be prescribed in hypothyroid obesity or in any indication for thyroid U.S.P. It may be tried in cases in which thyroid U.S.P. is not well tolerated.

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[1]M. Rec., 158:420, 1945

HOW SUPPLIED: Bottles of 30 tablets, grooved for easy division.

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For literature, sign and mail the coupon.

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Please send sample and literature on Thyrobrom.

Dr. _____

Address _____

Town _____ State _____

Gifts and Grants to Long Island College of Medicine

During the year ending January 1, 1946, gifts and grants totaling $143,437 were made to the Long Island College of Medicine, which exceeds by $16,063 the contributions received during 1945. These contributions, not including increments in the college's endowment funds, fall into six categories, as follows: general, $84,066; memorials and scholarships, $2,503; teaching, $21,904; research, $23,173; fellowships, $2,000; and prizes, $75.

The Development Fund from which a total of $63,662 was utilized during the calendar year 1945, represents the largest amount received. Since 1943 more than $200,000 has been contributed to the Development Fund in gifts by trustees, alumni, parents of students, business corporations, labor unions, and others. These funds have enabled the college to expand its facilities for teaching and research in several departments and to finance urgently needed extensions of its wartime program.

The Commonwealth Fund gave the second largest amount. It contributed $20,304 to the Department of Psychiatry. To establish this department the Commonwealth Fund made a six-year grant which started in 1943 with a contribution of $5,112. This department, named after the late Dr. William Alanson White, graduate of the college in the class of 1891, is now located in a new building at 88 Amity Street.

Other foundation contributions were $2,500 from the Community Service Society for the Department of Medicine, $2,000 from the Dazian Foundation for the Department of Physiology and Pharmacology, $1,226 from the Markle Foundation for the Department of Radiology, and $500 from the Harris McLaughlin Fund for the Department of Anatomy.

Organizations contributing to various funds were the Brooklyn Welfare Home for Girls with $500 for a scholarship, the Brooklyn Tuberculosis and Health Association, $1,000 for teaching and $500 for industrial medicine and the Family Service Association of Lawrence, $150 for the Psychiatric Library Fund.

Gifts for memorial purposes included $205 from Dr. Barnet Joseph for the Robert Graham Memorial; $550 from students of Public School No. 92 for the Allen B. Gansfried Memorial; and $200 from Dr. Louis Wender for the Peter Yudkowsky Memorial Scholarship, for which $10,007 has been contributed to date. The endowed scholarship fund received gifts of $150 from Phi Delta Epsilon and $148 from an individual contributor. Mrs. Sarah Beinfield Messing contributed an additional $300 for the scholarship previously endowed by her with a contribution of $5,000. The Jewish Hospital continued its annual scholarship grant of $350.

A special contribution of $5,000 was made by an individual donor for a study of the usually fatal skin disease, pemphigus vulgaris, to be carried out by Dr. Arthur W. Grace, professor of clinical dermatology and syphilology. A contribution of $8,725 was received toward the Permanent Endowment Fund.

Seven commercial firms made a total of eight grants for special studies in the departments of anatomy, bacteriology, obstetrics and gynecology, medicine, dermatology and syphilology, pediatrics and biochemistry.

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Progress in Electrocardiography

Dr. Samuel Blinder presented the report of the Committee on Scientific Progress on the progress in electrocardiography during 1945 to the New York Cardiological Society, at the annual meeting held on March 27th. He said that during 1945 nothing in the nature of an atomic bomb had been developed in the field of electrocardiography. Rather, there had been a healthy respect shown for basic principles, and an attempt at further clarification of all its phases with a reevaluation of our present knowledge. The report continues as follows:

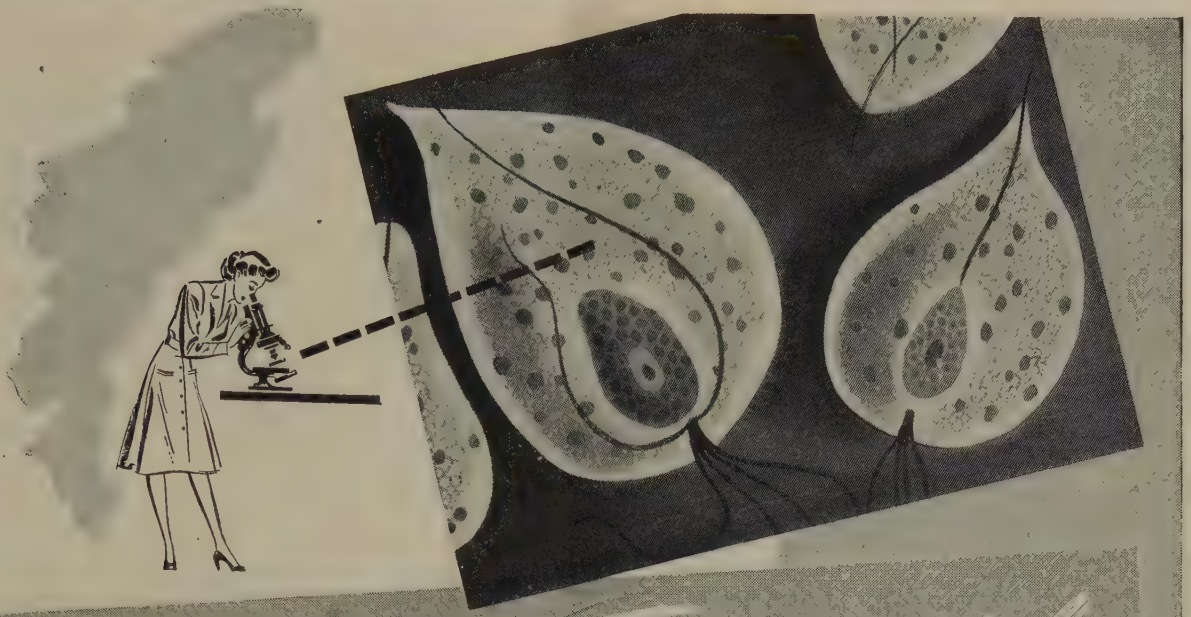
The battle is still going on as to whether the basic principle of Einthoven's triangle holds true, and many articles pro and con have been written. Considerable experimental work has been done in atrial flutter, atrial fibrillation, and paroxysmal tachycardia, in an attempt to prove whether or not these three types of rhythm can all be explained on the basis of a circus rhythm in the auricles, the path of which passes through one of the specialized atrial nodes. This has been done by the use of electrocardiograms taken in three planes of the chest and the derivation from them of curves and three dimensional changes of the consecutive atrial electrical axes.

From these experiments it is believed that in paroxysmal tachycardia the weight of evidence still points to the existence of an ectopic site of impulse generation. A theory has been advanced by Emanuel Goldberger that the left side of the interventricular septum is activated earlier than the right, and that the spread of the impulse through the septum from left to right is the basic cause of the Q wave in the human electrocardiogram.

Many new cases of the Wolff-Parkinson-Whit syndrome or anomalous atrioventricular excitation have been added to the literature. This syndrome is characterized by a short P-R interval and a broad QRS complex. It is generally conceded that the "bundle of Kent" theory is still the best explanation for the production of this type of electrocardiogram, and is based on the presumption that there is a transmission of impulses from auricles to ventricles by way of an accessory atrioventricular bundle. However in this condition it is also conceded that the impulses may also pass in their routine manner by way of the A-V nodes and the bundle of His.

The importance of position in the recording of electrocardiograms is again stressed. Emanuel Goldberger has shown that the effects of amyl nitrite on the downward T wave of the electrocardiogram is produced by deep inspiration rather than by the drug itself. It has been shown that atropine will shorten the P-R interval in acute rheumatic fever but the same effect can also be produced in certain vagotonic persons and therefore atropine can not be used as a differential diagnostic test.

In the field of coronary artery disease probably the outstanding achievement has been the recognition that minor changes in acute coronary thrombosis may occur not only in lead III but in all leads, these consisting of changes in the S-T or RS-T segments. If serial electrocardiograms are taken they will very frequently show the typical, classical pattern of an acute coronary thrombosis either anterior or posterior at a later date. In the past, those of us who have recognized the importance of these slight deviations from the normal have been criticized for, "reading too much into the electrocardiograms".



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*Angelucci, Helen M.: Am. J. Ob. & Gyn. *50*:336, 1945.

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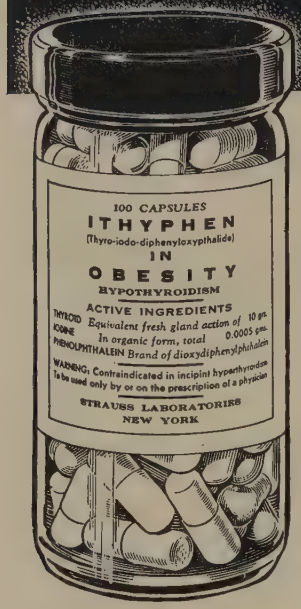

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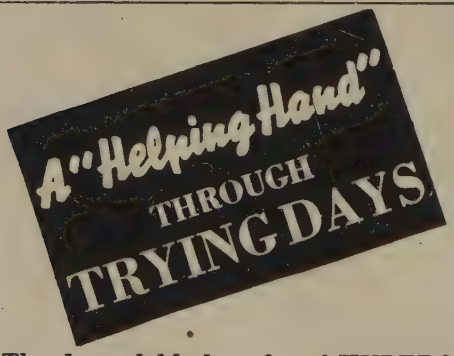

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It is interesting to note that the anoxemia test for the diagnosis of coronary artery disease where the routine leads have been found to be normal, have been replaced by use of exercise tests.

In the armamentarium of equipment many direct writing machines have been devised. The author is not familiar with the progress made using the continuous recording electrocardiograph as there have been no published reports on its use in 1945. It seems that it will be a tremendous help in electrocardiography.

Centennial of the Northern Medical Association of Philadelphia

The Northern Medical Association of Philadelphia, founded in 1846, is the oldest medical society in the city of Philadelphia, next to the Philadelphia College of Physicians. An American Medical Society of Philadelphia flourished for a short while in Philadelphia before 1846 at the beginning of the nineteenth century. Thirty-two of the most prominent medical men of Philadelphia met on December 5, 1846, to organize the Northern Medical Association. Among the organizers were Drs. Arnold Naudain, M. M. Lewis, Isaac Remington, Wilson Jewell, B. S. Janney, Knorr, Nathan S. Hatfield, J. Uhler, Stewart, Helffenstein, G. W. Patterson, E. G. Smith, James Patterson, Hart, Bibighaus, James R. Bryan, M. B. Smith, and Richard H. Townsend. The first regular officers, for 1847, were: president, Dr. Benjamin S. Janney; vice-president, Dr. Arnold Naudain; treasurer, Dr. Moses B. Smith; secretary, Dr. Isaac Remington; reporting secretaries, Dr. Richard H. Townsend and Dr. James R. Bryan. Official delegates of this association participated in the founding of The American Medical Association in May 1847 in Philadelphia, and also attended the American Medical Association convention in Baltimore in 1848.

The regular annual dinner-meeting of the Northern Medical Association was held March 21, 1946, at which the president, Dr. Myer Solis-Cohen, presided. Several past presidents, and Dr. M. S. Jacobs, chairman of the Centennial Committee, addressed the dinner guests. The Centennial Celebration and Banquet will be held December 5, 1946, and a historical pamphlet is being prepared. This will be only the second time in the history of Philadelphia that a medical organization celebrates a centennial anniversary; the first centennial celebration was held by the Philadelphia College of Physicians in 1887! Now, in 1946, the Northern Medical Association of Philadelphia is preparing for the outstanding medicohistorical event of 1946, in Philadelphia.

Among active past presidents are Drs. Moses Behrend, Victor Loeb, Irwin S. Meyerhoff, Milton K. Meyers, Mulford K. Fisher, Morris L. Fuchs, Alexander Sterling, Hyman I. Goldstein of Camden, N.J., Theodore Melnick, I. Binder, C. Schafer, Philip Rosenblum, J. M. Cahan, William A. Swalm, Harvey C. Masland, B. Ulanski, Mitchell Bernstein. Other members active on the committees are: J. S. Raudenbush, Benjamin H. Shuster, H. J. Darmstadter, Matthew S. Ersner, William Ezickson, M. S. Jacobs, B. Mann, Ludwig Loeb, Daniel Longaker. Dr. Myer Solis-Cohen is president, Dr. Paul Sloane is secretary, and Dr. A. E. Oliensis, treasurer.

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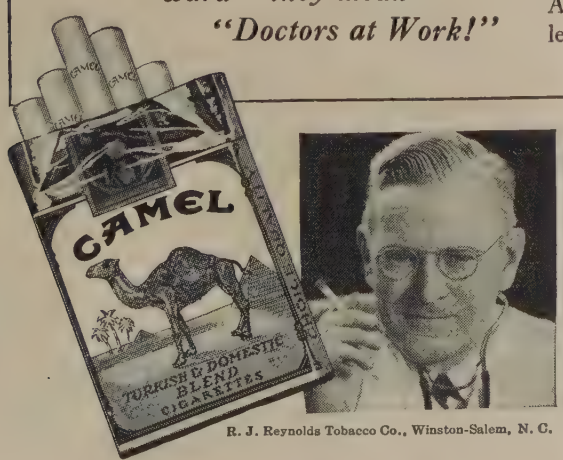

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Cancer Research

The annual report of the American Cancer Society, issued recently, states that appropriations virtually doubling funds now available for cancer research in the nation's universities, medical schools and other nongovernmental institutions have been made from funds raised by the American Cancer Society last year. The amounts totaled $800,000 but should be increaseed by $3,000,000, from the $12,000,000 which the Society is now seeking for an all-out attack on cancer.

Fifty-four initial grants for research projects and fellowships in twenty-nine universities and other centers were announced by the Society, and additional applications for 150 other research projects and fellowships totaling $1,734,224 are now under consideration. These, together with the continuation of current grants and additional projects now under way, will raise the total needed this year to more than $3,000,000, it was said, in order to complete a well-rounded program of research in fields essential to solution of the cancer problem. The research recommendations on which the Society acted were made in a report by the Committee on Growth of the National Research Council, which is advising the Society on its program.

Eric A. Johnston, chairman of the Cancer Society Board, in commenting on the report said that ninety of the nation's foremost scientists in fields related to cancer had been working for nine months on recommendations for a coordinated attack on cancer. The $800,000 which the American Cancer Society has appropriated to carry out their plans virtually doubles the amount of private support available for the research attack on cancer. These funds do not duplicate money which institutions are now receiving from other sources.

The largest single grant, Mr. Johnston said, was $50,000 for the purchase of substances known as isotopes, which have been developed as a result of atomic research. These substances are used in the socalled "tracer" technique which is used to study the composition of living cells. Grants for researches of this type at Columbia University and the University of Pennsylvania have been made by the Cancer Society. The report also announced that the committee was supplying the Manhattan District, the Army project which developed the atomic bomb, with data on the quantities of radioactive isotopes needed for medical and biological researches in fields allied to cancer.

In the field of physics a grant has been made to the University of Michigan for studies with the electron microscope, and another grant is to aid research workers at the Massachusetts Institute of Technology to develop new techniques for the use of the ultraviolet microscope. The University of Minnesota is being given funds to build a mass spectrometer, an atom-weighing machine used in cancer research to analyze compounds containing heavy isotope "tracers". The committee is also preparing a study for the general use of research workers outlining present and possible uses of heavy and radioactive tracer substances.

Work is being carried on with the Bureau of Standards to establish uniform standards of radioactive measurements. Another group has been organized to establish safety standards to protect research personnel against health hazards involved in radioactive researches.

Grants totaling $20,000 to Washington University in St. Louis, it was said, will help to develop there a center of biophysical research in relation to cancer.

The first grant made by the Society for cell chemistry research in relation to cancer is $15,000 to Harvard. The committee studying this field estimates that $150,000 will be needed for other cytochemical researches during the next year and that thereafter at least $500,000 will be needed annually. Grants of $28,500 have been made to study the effects of the chemical substances known as enzymes. One of these, at the University of Wisconsin, will apply a technique similar to commercial quick freezing to study why cancer cells use an abnormal amount of sugar.

In the field of nutrition, grants have been made to Yale, the University of Pittsburgh and the University of Wisconsin to study such questions as whether excess fat is a cancer hazard, and the part played by newly discovered vitamins in cell development.

An appropriation has also been made to work on an immense amount of data assembled by the National Academy of Sciences on chemicals developed during the war for insect and rodent control.

Columbia University, New York University, and Stanford University are being given funds to study the part which proteins play with relation to the growth of normal and abnormal cells. Growth factors in plants are to be studied at the New York Botanical Gardens, Yale, Stanford and the California Institute of Technology. Included in the botanical researches will be studies of a bread mold called Neurospora Crassa, which offers a possibility for investigating a wide range in cell development and control.

The committee announced that plans for new researches dealing with the relation of glandular products and viruses in relation to cancer were under way. It was stated that there was a great need for extensive research concerning the relation of the female sex hormones to the growth of cells and tissues.

Forty-three initial grants for research projects totaling $320,020 were made to the following institutions: Brown University, California Institute of Technology, Carnegie Institution of Washington, University of Chicago, Columbia University, University of Connecticut, Free Hospital for Women (Brookline, Mass.), Harvard University, University of Indiana, Johns Hopkins University, Massachusetts Institute of Technology, University of Michigan, University of Minnesota, National Academy of Sciences, New York Botanical Gardens, New York University, Ohio State University, University of Pennsylvania, University of Pittsburgh, University of Rochester, Stanford University, Washington University, University of Wisconsin, Wistar Institute and Yale University.

Research Fellowships

Appropriations totaling $50,225 for nine research fellowships covering periods of from one to three years have also been made by the Cancer Society. Two fellowships each were established for research work at the University of Pennsylvania and Massachusetts Institute of Technology. The remaining fellowships were granted for work at Harvard, Memorial Hospital in New York City, the University of Michigan and the University of Virginia.

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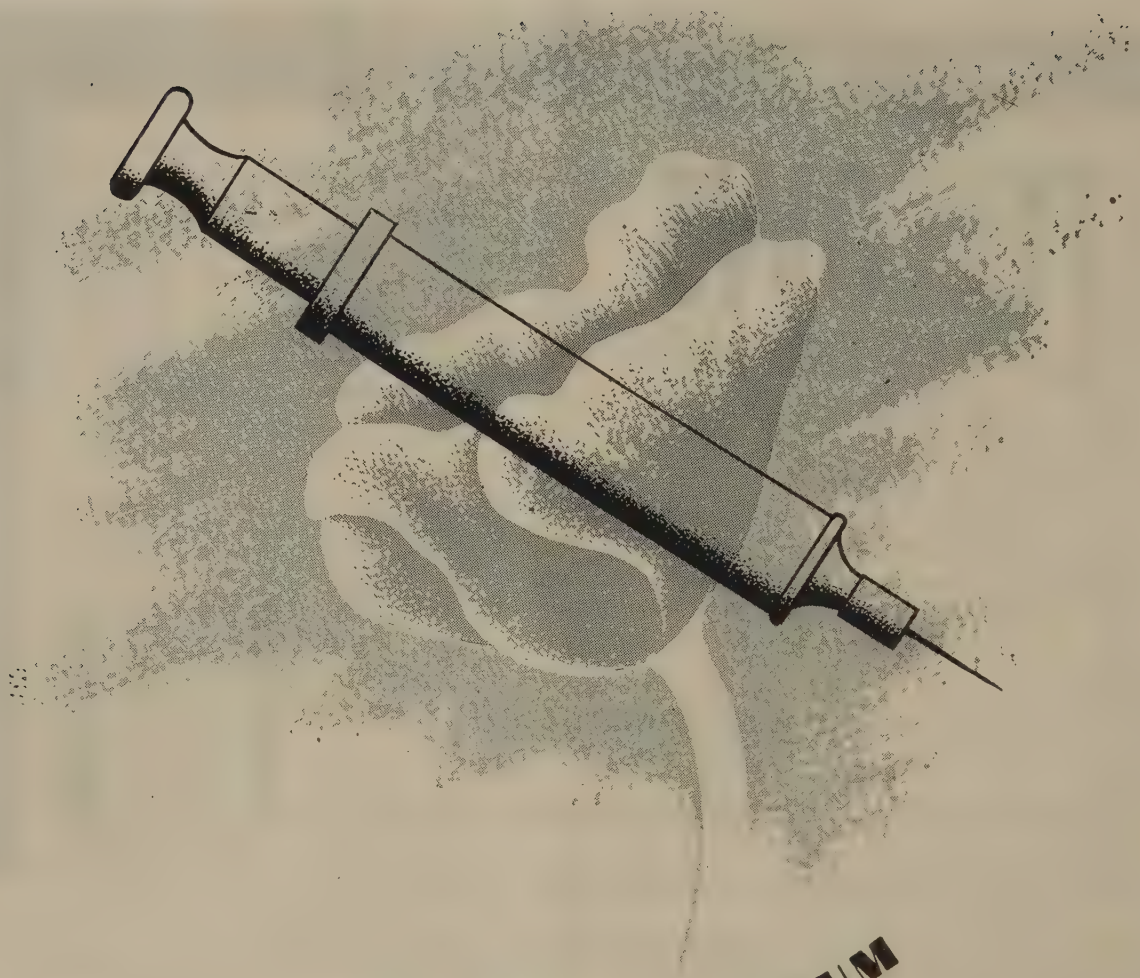

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MEDICAL RECORD

PUBLISHED MONTHLY BY
THE MEDICAL JOURNAL AND RECORD PUBLISHING CO., INC.

VOL. 159, No. 5 MAY 1946 WHOLE No. 2760

ARTHRITIC SYNDROMES*

II. Reiter's Disease Followed by Endocarditis and Lupus Erythematosus Disseminatus After Sulfathiazole Treatment

JULIUS BAUER, M.D. and OTTO ARNDAL, M.D.
Los Angeles, California

Disseminated lupus erythematosus originally considered as a dermatological disease entity has shifted into the realm of internal medicine in the last decade. The manifestations of the disease on the skin are thought to be of minor importance—perhaps not even obligatory—as compared with the visceral symptoms and signs. Numerous excellent descriptions of the clinical picture of disseminated lupus erythematosus were published in various articles of the last few years and make it unnecessary to repeat the known facts once more. Anatomically the disease is characterized by a more or less systemic affection of the collagenous tissue of the body in general, and of the small blood vessels in particular. (Klemperer, Pollack, and Baehr 1941, 1942.) Its relationship to periarteritis nodosa, dermatomyositis, and acute rheumatic fever is generally agreed upon. From both clinical and anatomical points of view it is an inflammatory process without a known specific infectious causative agent. A particular "hyperergic" (allergic) inflammatory reaction to various infectious stimuli rather than a specific infectious agent has to be considered as the main etiological factor of the disease (Bauer-Jokl, 1920). The well known photosensitivity of patients with disseminated lupus is another important cooperative factor. Perhaps it is this factor that is chiefly responsible for the characteristic clinical picture, differentiating it from etiologically similar pathological processes such as periarteritis nodosa or dermatomyositis.

The case we are about to report sheds light upon the pathological mechanism of disseminated lupus. It is interesting not only from the etiological but also from the clinical point of view, because it seems to demonstrate that there may exist more or less benign, rudimentary varieties of the disease, "lupoid reactions", so to speak, or formes frustes of the disease.

Case Report

E. B., a forty-four year old Philippino, a workman in a fish cannery, was admitted to the urology department of the hospital on January 28, 1945. He complained of having had a penile discharge and a painful swollen left knee for five days. There had been several exposures lately and at least one was suspected as a possible source of venereal infection. The patient denied having had gonorrhea or syphilis in the past. No history of rheumatic fever or tuberculosis was given.

On admission the patient had a temperature of 104° and a pulse rate of 90. There was a purulent penile discharge. The left knee was swollen, hot, and very painful. The right ankle was also aching and tender on pressure. Other abnormalities were not found on physical examination. There were no murmurs heard over the heart. Under the impression that it was a case of gonorrheal arthritis, treatment with sulfathiazole, two grams every four hours, was immediately started. There was no response to this treatment, and penicillin, one hundred thousand units daily, intramuscularly, was started January 30th. There was, however, no response, although penicillin was given for ten days and sulfathiazole repeated in the doses of one gram three times a day. On February 9th multiple maculopapular eruptions on the arms, hands, and face were noted and interpreted as a sulfa reaction. By this time considerable bilateral conjunctivitis had developed. Gonococci or other germs had not been detected in the urethral discharge, and complement fixation reaction had been negative. Therefore, on February 17th the consulting medical resident, Dr. A. McGuffin, ordered the transfer of the patient to the medical service.

The patient was a short and slender man of proportionate body build. He was running a temperature varying between 99° and 103° and had still the acute, very painful arthritis in the left knee. In a mild degree the right ankle and right elbow also were involved. The penile discharge had subsided by this time and the conjunctivitis was clearing up too. There were moist râles over the right lung and the x rays of the chest showed a zone of infiltration underlying the fourth rib anteriorly, suggesting early pneumonia. On February 21st pleural friction rubs were noted at both lung bases. The physical findings over the lungs were transitory, however, and disappeared completely in a few days. The heart was found to be normal in size and shape, the sounds were muffled and a systolic apical murmur noted. The electrocardiogram showed sinus rhythm of 90 per minute and a markedly prolonged PR interval of 0.32 seconds. The QRS was 0.06 seconds. Furthermore, there was a left axis deviation.

*From the Medical Service of the Los Angeles County General Hospital and the College of Medical Evangelists, Los Angeles, California.

These findings were interpreted as suggestive of endocarditis. This diagnosis was corroborated by the appearance on February 26th of a diastolic murmur over the precordial region, best heard at the left sternal border in the fourth intercostal space. Later both systolic and diastolic murmurs varied in intensity, and became gradually louder and audible over a larger area. The electrocardiogram was repeated at frequent intervals and showed constantly a PR interval varying between 0.26 seconds and 0.32 seconds. The pulse rate ranged between 80 and 100; the blood pressure between 120/70 and 135/85.

Skin lesions were localized bilaterally in a triangle formed by the pinnæ of the ears, the mandibular angles and the malar eminence. They involved both ear pinnæ and the dorsa of the hands. The lesions were discrete, dark, reddish patches, slightly raised with adherent scales. They were up to 1.5 cm. in diameter and became confluent in the face. Some of the lesions seemed to show a central depression. They were neither painful nor pruritic. In the next few weeks the skin eruption disappeared and a scarcely visible, slightly depressed scar of a lighter color than the surrounding skin persisted on the cheeks.

There were no other abnormalities found on the patient. In particular, there was no enlargement of the liver and spleen, and no lymphadenopathy. The eyegrounds, and especially the blood vessels of the fundi were normal in appearance.

Laboratory Findings

Urinalysis was normal on frequent occasions. On May 5th a culture of the urine was made and streptococcus viridans and staphylococcus albus were cultivated.

Blood counts revealed consistently a moderate to slight normochromic anemia and a tendency to slight leukocytosis, but without signs of stimulation of the bone marrow.

February 26: Red blood cells, 3,840,000; hemoglobin, 12.24 gms., 76.5 percent; color index, 1.07; white blood cells, 8,500; neutrophiles, 78 percent; lymphocytes, 15.5 percent; monocytes, 4.5 percent; eosinophiles, 1 percent; basophiles, 1 percent; reticulocytes, 0.6 percent; platelets, normal.

March 7: Red blood cells, 4,270,000; hemoglobin, 12.75 gms., 79.7 percent; color index, 0.98; white blood cells, 13,000; neutrophiles, 44.5 percent, (stabs 3 percent); lymphocytes, 48 percent; monocytes, 6 percent; eosinophiles, 1 percent; basophiles, 0.5 percent; reticulocytes, 0.5 percent; platelets, normal.

May 18: Red blood cells, 3,500,000; hemoglobin, 12 gms., 70 percent; color index, 1.0; white blood cells, 13,400; neutrophiles, 70 percent.

June 11: White blood cells, 10,500; neutrophiles, 74 percent.

There was a slight anisocytosis and poikilocytosis and slight toxic granulation of the neutrophiles.

Sedimentation velocity of the red blood cells was consistently elevated to between 35 mm. and 28 mm. per 60 min. (corrected).

Blood cultures were negative on repeated occasions. (2/7; 2/17; 2/19; 2/20; 5/14.)

Agglutination for typhoid, paratyphoid, brucellosis and proteus 0 x 19 was negative. Heterophilic agglutination was positive in 1:14 dilution only.

Blood protein: February 20: albumin, 4.1 gm. per 1,000 cc.; globulin, 4.8 gm. per 1,000 cc.; albumin—globulin ratio equals 0.85. April 24: albumin, 4.0 gm. per 1,000 cc.; globulin, 4.3 gm. per 1,000 cc.; albumin—globulin ratio equals 0.93.

Sputum was negative for acid fast bacilli. Culture: Streptococcus (viridans) and alcaligenes fecalis. Typing: no reaction with antipneumococcic sera types I to XXXIII (Neufeld method) (2/7).

Biopsy of a skin lesion was done on April 9. The microscopic examination of the skin lesion was found to be consistent with the clinical diagnosis of disseminated lupus erythematosus. As a matter of fact, this diagnosis must be based on the clinical rather than the histological picture of disseminated lupus erythematosus.

Dr. E. M. Butt reported as follows: "There is a slight atrophy of the epidermis. In the basal area of the stratum malpighii there is much finely granular melanin pigment. The stratum granulosum is poorly defined. There is some fraying and thickening of the stratum corneum. In one area there is vacuolar degeneration of a small group of cells of the stratum malpighii. There is little of note in the papillary portions of the corium. In an occasional perivascular space a few round cells are found. Deep in the corium, about the coiled glands and larger vessels, there are heavier infiltrations of round cells, plasma cells and a few polynuclear leucocytes. Muscle containing section shows a mild but definite myositis. In addition marked tinctorial changes are present in many of the muscle bundles indicating some degenerative process."

Course of the disease.—The urethritis and conjunctivitis had subsided in the first two to three weeks. The arthritis cleared up in about eight weeks. The same holds true for the skin lesion. The pleuropulmonary involvement had lasted only a few days. The physical signs of endocarditis, however, persisted. The temperature remained elevated and reached occasionally peaks up to 102°-103° until April 1st. From this time on the temperature remained normal. Pulse rate in the febrile period ranged from 80 to 100, and after April 1st from 76 to 80. Patient was discharged on June 16th without subjective symptoms.

The treatment consisted, first, of sulfathiazole, as mentioned previously. From January 28th until February 8th a total of seventy-three grams of sulfathiazole had been given. On February 12th again six grams were administered. Penicillin had been administered between January 30th and February 13th in a total dosage of five hundred thousand units. Because of lacking supply the administration had to be interrupted for several days. Later salicylates, vitamins, iron, and physiotherapy had been used.

Symptomatology of Reiter's Disease

Reviewing and interpreting the history of our patient it can be seen that he presented an unusual combination and sequence of symptoms and signs. At the onset of his illness there was a triad consisting of a nongonorrheic urethritis, acute arthritis and conjunctivitis. This triad was complete within two weeks of the time of onset and is known as Reiter's disease. It was first described by H. Reiter in 1916, who believed it to be caused by a spirochete. Later observations, however, did not substantiate this view and no specific

germs were found in the urethral secretion, conjunctiva, or joint fluid that could have been considered as the etiological factor. According to W. Bauer and Engleman (1942) twenty additional cases had been reported until 1942. These authors were the first in this country to report six more cases. Since then two cases have been placed on record by Colby (1944), ten by Rosenblum (1945), two by Miller and McIntyre (1945) and two by Hollander, et al. (1945).

Reiter's disease has been recognized only in young men. The complete triad of acute purulent urethritis, conjunctivitis and arthritis is present within ten to twenty-one days of the time of onset. Urethritis and conjunctivitis may last only a few days or weeks, whereas the arthritis is persistent for two or three months and even longer. Any one of the symptoms, particularly the arthritis, may recur after several months up to two and one-half years. About twenty-five percent of the patients are bound to expect such a recurrence.

Usually the disease starts with a mucopurulent discharge from the urethra. No bacteria can be found in the exudate. In a patient reported by W. Bauer and Engleman, however, urethral smears taken during a recurrence thirteen months after the original disease, revealed gram positive cocci and diphtheroids. In some patients prostatitis, cystitis or superficial balanitis may develop. Conjunctivitis, similar to pink eye, is frequently observed without any complications. Occasionally, however, keratitis and corneal ulcers may develop. The most distressing part of the triad is the arthritis which may affect the knees, ankles, hips, the small joints of the fingers and toes and others. The involved joints show all signs of acute or subacute inflammation. The joint fluid is sterile and biopsy of the synovial membrane of the affected knee did not show any characteristic features.

There is moderate fever, leucocytosis varying between ten thousand and twenty thousand per cu.mm., and an increased sedimentation velocity of the red cells. No inclusion bodies were found in conjunctival scrapings. Blood cultures are consistently negative. Complement fixation tests for gonorrhea are negative.

No involvement of the heart has been reported in cases of Reiter's disease and the electrocardiogram has always been found to be normal. One case reported by Rosenblum had a widespread, acute skin eruption resembling erythema multiforme; this eruption led to desquamation and extended to the oral and pharyngeal mucosa.

There is no evidence of Reiter's disease being a venereal infectious disease. Only one single case reported by Rosenblum is suggestive of such an assumption. This patient had sexual contact with one woman on two occasions, separated by an interval of two and one-half years. Two and three weeks, respectively, after each exposure he developed the triad of symptoms. No specific treatment has been found as yet. Sulfa drugs, penicillin, neoarsphenamine and salicylates were found to be of no benefit except for the analgesic effect of the latter.

Lupus Erythematosus Disseminatus

Although our patient's illness had to be diagnosed as Reiter's disease at its onset, the later course and clinical picture deviated considerably from what has hitherto been known as characteristic of Reiter's disease. Involvement of the heart, bronchopneumonia and pleurisy have not been reported in Reiter's disease. The skin lesion seen in our patient had no resemblance with the one observed in Rosenblum's case. The dermatosis of our patient had to be classified as lupus erythematosus rather than as erythema multiforme both for clinical and histological reasons. The increased amount of globulin in the blood plasma of our patient has never been reported in a case of Reiter's disease, but it is known to occur regularly in cases of disseminated lupus erythematosus (Keil, 1940; Coburn and Moore, 1943).

The most striking feature was the gradual development of endocarditis in our patient, proved by the appearance of a systolic and later a diastolic murmur over the heart and by the considerably prolonged PR interval in the electrocardiogram. It was not the bacterial type of endocarditis but rather the rheumatic or the "atypical form of verrucous endocarditis" described by Libman and Sacks (1924). The differentiation between these two "nonbacterial" varieties of endocarditis on a purely clinical basis can only claim a certain degree of probability. Reliable criteria, such as presence or absence of Aschoff's bodies and the involvement of the mural endocardium, are not available in the living patient.

The association of the subacute, nonbacterial endocarditis with the skin lesion of the lupus erythematosus type is sufficient reason to diagnose Libman-Sacks variety rather than rheumatic endocarditis. Among eleven unquestionable cases of Libman-Sacks endocarditis found among six thousand autopsies and studied by Gross (1932), there was lupus erythematosus in five. Such a combination is not known in rheumatic fever. The pleuropulmonary episode cannot be used as a differential criterion since it may occur in both Libman-Sacks and rheumatic endocarditis. The same holds true for the increased serum globulin. Globulin has been found increased not only in disseminated lupus, but also in rheumatic fever (Rutstein, Clarke, and Taran, 1945).

With regard to the arthritis of our patient, we come to the conclusion that it was first a part of Reiter's disease, that is, caused by an infection of unknown origin. Later it became one of the manifestations of the disseminated lupus that superseded Reiter's disease. There were no pericarditis, nephritis, petechiæ, enlargement of the spleen or leukopenia in our case during the time of the observation in the hospital. It can be assumed with fair probability that these manifestations of lupus erythematosus disseminatus so far (October) have not recurred, as the cooperative and intelligent patient would have come to see us or inform us by mail if his satisfactory condition had deteriorated after his discharge from the hospital. Except for the cardiovalvular defect resulting from the endocarditis the patient had no symptoms or signs of his disease at the time of his discharge.

Although we do not feel so sure about the patient's future, and a recurrence of the disseminated lupus at any time would not be surprising, we venture to assume and to hope that we had to deal with a benign and rudimentary variety of the disease; in other words, with a "forme fruste".

Etiological Mechanism

Lupus erythematosus disseminatus, as well as periarteritis nodosa, is considered today as allergic manifestation of a particular type. The allergic nature of acute rheumatic fever has been claimed for more than thirty years by European investigators. Even before the term "allergy" was coined by von Pirquet, in 1897, Chvostek expressed his belief that acute rheumatic fever should not even be spoken of as a disease entity since a specific germ probably never would be detected. Various infections should be capable of producing the picture of acute rheumatic fever in predisposed individuals by toxic products of the bacterial invaders. As far as acute rheumatic fever is concerned the rôle of bacteria, probably streptococci, as a source of those toxic products acting as allergens, is undisputed.

With regard to disseminated lupus and periarteritis nodosa, however, the situation seems to be somewhat different. It has been established that the allergens acting in these diseases may be of nonbacterial origin and, primarily, not even proteins. Nonprotein drugs, particularly sulfonamide drugs, are capable of producing the clinical picture of both lupus erythematosus disseminatus (Hoffman, 1945; Peterkin, 1945) and periarteritis nodosa (Rosenak and Maschmeyer, 1945). Necrotizing fibrinoid arteritis of the smaller vessels is the characteristic anatomical picture found in fatal cases of sulfonamide poisoning (Black-Schaffer, 1945). Serum sickness (Rich, 1942; Rich and Gregory, 1943), sulfonamides, but also thiourea and thiouracil (Marine and Bauman, 1945; Gibson and Quinlan, 1945), and in certain animals desoxycorticosteron (Selye and Pentz, 1943) may produce the anatomical changes of periarteritis. It is apparently some conjugated serum-sulfonamide compound that is acting as an allergen and simultaneously as a photosensitizer. Such conjugations with serum proteins may also occur if other drugs, e.g., stilbestrol, prove to be injurious to some individuals and act as allergens (Elias and Schwimmer, 1945).

As a matter of fact, sulfonamide drugs as etiological factors in lupus erythematosus disseminatus are only one among many varieties of possible allergens being operative in the etiology of the disease. Callender, Race, and Paykoc (1945) reported a case of disseminated lupus erythematosus who showed an extraordinary hypersensitivity to transfused blood, although this must have been considered as fully compatible according to all tests and precautions taken. "The patient must be extraordinarily sensitive to antigenic differences, and this supports the hypothesis that the disease lupus erythematosus is a manifestation of some undetected antigen-antibody reaction."

Regarding these facts and the modern interpretation of disseminated lupus erythematosus (Fox, 1943), it seems justified to assume that our patient developed lupus as a consequence of the sulfathiazole treatment which had been continued up to a total dose of seventy-three grams, though there was no apparent therapeutic effect. Reiter's disease, that is an infection of unknown origin being refractory to sulfonamides, might have supplied the basis for the formation of a protein-sulfonamide-compound that acted as an allergen in our patient. Libman-Sacks endocarditis was, up to date, the only manifestation of the ailment that left behind a permanent injury by damaging the cardiac valves. It seems thus far that the patient has overcome his allergic reaction and it is to be hoped that he will be spared another, perhaps fatal, episode of disseminated lupus, particularly if he keeps away from future administration of sulfa drugs. We did not dare to take any chances by testing the patient with even minute doses of sulfathiazole after having recognized the etiological mechanism of his disease.

What factors, except for the photosensitivity of unknown chemical nature, may be responsible for the fact that the same etiological mechanism causes in one person a disseminated lupus erythematosus and in another periarteritis nodosa, we do not know. Yet Libman-Sacks endocarditis in lupus erythematosus disseminatus may be looked upon as an equivalent of the vascular changes in periarteritis nodosa, since it is the same biological unit (cardiovascular system) that becomes affected in both diseases.

Concerning the terminology we fully agree with Blount and Barrett (1945), who "question the existence of a separate clinical entity termed the 'Libman-Sacks syndrome' and suggest that it is a local manifestation of an extensive and widespread pathological process described previously as acute disseminated lupus erythematosus." We also agree with these authors if they wish to eliminate the term "lupus" for the designation of this pathological process. This is all the more true if the skin lesions have no likeness to the dermatological picture of lupus erythematosus, or if they are even lacking completely. Some cases presenting erythematous rather than lupoid lesions belong to Osler's "erythema group" (Osler, 1904). The term "visceral angiitis" is also unsatisfactory (Selzer, 1945). In the meantime, however, we may use the term disseminated lupus erythematosus, at least for our case presenting characteristic skin lesions, in order not to complicate further the already complex terminology. Paramount is the comprehension of the etiological, pathogenetic and pathological mechanism of each individual case; the terminology might be of secondary importance.

It is obvious that the administration of sulfa drugs without a strict indication, and particularly its continuation for some length of time in spite of failing therapeutic response, involves a potential danger. The various toxic manifestations, such as leukopenia, anemia, dermatoses, damage of the kidneys and liver are generally known today. The occurrence of allergic reactions discussed in this paper and resulting in disseminated lupus erythematosus or periarteritis nodosa should be added to the list of dangerous potentialities and kept in mind, especially if sulfa drugs are prescribed for febrile states without known bacterial etiology.

Summary

The case of a male Philippino has been reported, who first developed Reiter's disease, that is, the triad consisting of nongonorrheic, unspecific urethritis, arthritis and conjunctivitis. The unsuccessful treatment with sulfathiazole resulted in the development of what is being interpreted as rudimentary disseminated lupus erythematosus of the subacute type. A bacterial endocarditis (Libman-Sacks variety), skin lesions, a pleuropulmonary episode, and increased serum globulin are the criteria for this diagnosis. It is assumed that the

administration of sulfathiazole, probably by its conjugation with protein, acted as allergen to bring about the syndrome of disseminated lupus.

Bibliography

BAUER-JOKL, M.: *Arch. f. Dermat. u. Syph.* 127:342, 1920.
BAUER, W., and ENGLEMAN, E. P.: *Transact. Assoc. Am. Phys.* 57:307, 1942.
BLACK-SCHAFFER, B.: *Arch. Pathol.* 39:301, 1945.
BLOUNT, S. G., JR., and BARRETT, J. T.: *Ann. Int. Med.* 23:251, 1945.
CALLENDER, S., RACE, R. R., and PAYKOC, Z. V.: *Brit. Med. Jour.* 83, July 21, 1945.
CHVOSTEK, F.: *Verhandl. Deutsch. Ges. f. innere Med.* 15:99, 1897.
COBURN, A. F., and MOORE, D. H.: *Bull. Johns Hopkins Hosp.* 73:196, 1943.
COLBY, F. H.: *Jour. Urol.* 52:415, 1944.
ELIAS, H., and SCHWIMMER, D.: *Am. Jour. Med. Sc.* 209:602, 1945.
FOX, R. A.: *Arch. Pathol.* 36:311, 1943.
GIBSON, P. C., and QUINLAN, J. T.: *Lancet,* 108, July 28, 1945.
GROSS, L.: Contribution to the medical sciences in honor of Dr. Em. Libman. The International Press, New York. 2:527, 1932.
HOFFMAN, B. J.: *Arch. Dermat. u. Syph.* 51:190, 1945.
HOLLANDER, J. L., FOGARTY, C. W., ABRAMS, N. R., and KYDD, D. M.: *J.A.M.A.* 129:593, 1945.
KEIL, H.: *Arch. Int. Med.* 66:339, 1940.
KLEMPERER, P., POLLACK, A. D., and BAEHR, G.: *Arch. Pathol.* 32:569, 1941. *J.A.M.A.* 119:331, 1942.
LIBMAN, E., and SACKS, B.: *Arch. Int. Med.* 33:701, 1924.
MARINE, D., and BAUMANN, E. J.: *Arch. Pathol.* 39:325, 1945.
MILLER, C. D., and MCINTYRE, D. W.: *Ann. Int. Med.* 23: 673, 1945.
OSLER, W.: *Am. Jour. Med. Sc.* 127:1, 1904.
PETERKIN, G. A.:, GRANT: *Brit. Med. Jour.* 1, July 7, 1945.
REITER, H.: *Deutsche Med. Woch.* 42:1288, 1916.
RICH, A. R.: *Bull. Johns Hopkins Hosp.* 71:123 and 375, 1942.
RICH, A. R. and GREGORY, J. E.: *Bull. Johns Hopkins Hosp.* 72:65, 1943.
ROSENAK, B. D., and MASCHMEYER, R. H.: *Lancet,* 305, March 10, 1945.
ROSENBLUM, H. H.: *U.S. Navy Med. Bull.* 44:375, 1945.
RUTSTEIN, D. D., CLARKE, F. H., and TARAN, L. M.: *Science,* 101:669, 1945.
SELYE, H., and PENTZ, E. J.: *Can. Med. Assn. Jour.* 49:265, 1943.
SELZER, G.: *Clin. Proceed.* 4:156, 1945.

Addendum: The following publications on Reiter's syndrome appeared after this paper had been sent to press:

LUCAS, R. L., and WEISS, H.: *Arch. Ophthalmol.* 34:97, 1945.
STRACHSTEIN, A.: *New York State Jour. Med.* 45:2190, 1945.
SARGENT, J. C.: *Jour. Urol.* 54:556, 1945.
ROSEN, L. L.: *Jour. Am. Osteop. Ass.* February 1946.
HORSTMAN, D. M.: Unexpected recovery from disseminated lupus erythematosus in a child. *Jour. Pediat.* 27:235, 1945.

1680 VINE STREET

THE SPECIFIC DIAGNOSIS OF RHEUMATOID ARTHRITIS*

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The following is an abstract and summary of one and a half years' experience in the field of rheumatoid arthritis work done on Dr. Mayer's service.

Arthritis is not a disease, it is merely one symptom of many diseases. This is disclosed by the following classification suggested by the American Rheumatism Associated. (Abbreviated)

A. Joint diseases of unknown etiology:
  1. Rheumatoid arthritis: Synonyms: atrophic arthritis; infectious (infective) arthritis; arthritis deformans;
     Felty's disease; proliferative arthritis; primary, progressive arthritis; focal arthritis;
     Still's disease;
     Psoriatic arthritis;
     Marie-Strumpell arthritis; atrophic arthritis of the spine;
  2. Osteoarthritis; hypertrophic arthritis; degenerative arthritis; senile arthritis; malum (morbus) coxæ senilis;
  3. Mixed arthritis;
  4. Rheumatic fever.

B. Joint diseases of known etiology

C. Nonarticular ("rheumatic") disorders (of known and unknown etiology)

I have abbreviated this list for the sake of clarification and in order to enable one to find quickly the placement of rheumatoid arthritis. Another list, advocated by the Sub-Committee of the Arthritis Welfare Council of New York City, is related to this list. The interest here concerns rheumatoid arthritis only. The word "rheumatism" has been used for a number of different conditions; rheumatoid arthritis is one of them, rheumatic fever is another one, and still other conditions are rheumatic fibrositis, rheumatic neuritis, and palindromic rheumatism. Rheumatoid arthritis is a clear cut picture, easily differentiated from other types of joint involvement, especially osteoarthritis and rheumatic fever.

Establishing the correct diagnosis of rheumatoid arthritis means approaching the condition in the proper way. It means specific medical treatment, specific physical therapy, proper orthopedic treatment as a part of the correct and proper management of rheumatoid arthritis.

Etiology.—The etiology of rheumatoid arthritis has not been established as yet although its bacterial origin has often been suggested. Blood studies of patients suffering from rheumatoid arthritis indicate bacterial inflammation. Nowadays we are not so sure any more about focal infection such as tonsillitis, dental foci, etc. There are predisposing and contributory factors: postural defects, climate, social factors, trauma, metabolic factors, chemical bases, glandular disturbances, rôle of the gastrointestinal tract, liver function, allergy and vasomotor disturbances.

Symptomatology.—According to Taylor (1) we divide rheumatoid arthritis into four stages: 1, early; 2, moderately advanced; 3, advanced, and 4, terminal, based on clinical features, laboratory data and x ray findings.

I am not going to talk about degrees of rheumatoid arthritis because I want only to show the points which help us to establish the diagnosis of rheumatoid arthritis. It is a *generalized* condition never settling in one joint. It is for this reason that laboratory tests are

*Read on January 23, 1945, at the orthopedic meeting of the Hospital for Joint Diseases, New York City.

so helpful in its diagnosis. We never make the diagnosis of rheumatoid arthritis before at least six weeks' duration because there is no definite differentiation from rheumatic fever before that time. There is usually a symmetrical distribution of the involved joints. The affected joints show, in the beginning, a soft and fluctuant swelling. There is often fusiform swelling of proximal interphalangeal joints, often effusion of knee joints and ankles. In some cases there are rheumatoid nodules near the elbows. The onset is either fulminating with fever, or insidious and there is sometimes a rapidly developing muscle atrophy. Rheumatoid arthritis is a disease of early adult life but the onset may be at any time of life. Female patients are more frequently affected than males. There is often a loss of weight, a feeling of weakness, and the hands and feet are cold, clammy and slightly cyanotic. The patients state that their feet feel especially cold when they go to bed. The heart is not damaged as it often is in arthritis due to rheumatic fever. But there is usually tachycardia and a slight elevation of temperature. Fifteen to twenty percent have subcutaneous nodules, the size of a pinhead or more. We find them on the dorsal surface of the forearm near the elbow and in bedridden patients also along the upper spine and the neck.

Localization.—The most frequently affected joints are the proximal interphalangeal joints of the second to fifth finger and the metacarpophalangeal joints of the second and third finger. This localization helps to differentiate rheumatoid arthritis from osteoarthritis which favors the terminal finger joints forming their thickening and enlargement, known as Heberden's nodes. The knees and the little joints of the feet are not so often affected. The knee joints show effusion in rheumatoid arthritis but not in osteoarthritis. The little joints of the feet show the same clinical and x ray changes which we find in the little joints of the hands. Rheumatic changes of the joints of the spine belong to a separate group, the spondylarthritis ankylopoietica —Marie-Strümpell arthritis.

Laboratory Findings

Red blood picture.—We often find hypochromic anemia. Those cases which have a normal red blood count have a better prognosis of recovery. Recently we have been using injections with a nontoxic gold compound, "lauron", for our patients with rheumatoid arthritis. We notice that some of them suffered an increase of their anemia as the first reaction to the gold treatment. This took a turn to rapid improvement a few weeks later.

White blood picture.—This gave us interesting findings. The white blood count is usually within normal limits. In acute cases there is sometimes a leukocytosis. We found a number of cases with lymphocytosis which do not belong in the group of Felty's syndrome. It was noticeable that this group responded readily to gold treatment, especially if the sedimentation rates were only slightly elevated or normal. In some cases in which there was no lymphocytosis at the beginning of the treatment, we could see a temporary lymphocytosis during improvement.

The nonfilament count.—This finding is often helpful in making a differential diagnosis. It enables us to differentiate osteoarthritis which is a noninflammatory condition from rheumatoid arthritis which is an inflammation. The nonfilament count is the differential count of the immature neutrophiles. It was observed that in toxic or infectious conditions the bone marrow responds even to a mild but persistent stimulus exerted by the pathological process. This reaction is evidenced by the release of available mature polymorphonuclear leukocytes and of an increased amount of immature cells. The number of immature cells provides an index to the activity and severity of the underlying process.

In the filament-nonfilament count the neutrophiles are divided according to their age into two classes. The first or nonfilament group consists of young neutrophiles in which the nuclear parts are still joined by thick portions of nuclear material. The second or filament group consists of those neutrophiles in which a fine filament of chromatin material connects two or more segments of the nucleus, i.e., the true polymorphonuclear cells. The distinction is based on the criterion of Cooke and Ponder: If there is any band of nuclear material except this chromatin filament connecting the different parts of the nucleus, that nucleus for the purpose of the count, cannot be said to be divided.

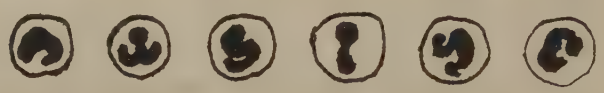

FIG. 1.—Various forms of nonfilament neutrophiles.

In normal cases we find a nonfilament count of eight percent to sixteen percent of all polymorphonuclears. In ninety-seven percent of rheumatoid arthritis we find about thirty-one percent nonfilaments. The nonfilament count is based on Schilling's shift to the left. It includes myelocytes, juvenile and stab cells of Schilling's hemogram. The nonfilament count cannot be used in focal infections because the presence of such an infection in tonsils or teeth raises the nonfilament count. After the focus has been removed the elevated nonfilament count regains its value as a differential feature between rheumatoid arthritis and osteoarthritis. Important papers, besides Schilling's publication, are written on that subject by Cooke and Ponder (2), Farley, Clair and Reisinger (3), and by Steinbrocker and Hartung. The nonfilament count is a more reliable test for inflammation than the sedimentation rate; why, shall be later explained.

Sedimentation Rate

The sedimentation rate is valuable as a diagnostic aid but it is often misinterpreted. It is not true that a normal sedimentation rate rules out rheumatoid arthritis, nor is it true that a normal sedimentation rate is a contraindication to gold treatment. One and a half year's observation showed us that patients suffering from rheumatoid arthritis with normal sedimentation rates have a good general resistance and respond readily to gold treatment. The sedimentation rate is not a manifestation of the degrees of a disease, nor it is a manifestation of the invading germ. It is rather an indication of the patient's defence power. An increased sedimentation rate is due to the change of the albumin-globulin ratio in the patient's serum. The improvement of a patient's condition does not necessarily correspond with the improvement of his sedimentation rate. The

latter often comes afterwards. Cutler (5), considers increased sedimentation rate as representing a change in the composition of the plasma which has resulted from absorption of tissue destruction into the blood. The rate of red cell sedimentation then serves as an indirect measure of tissue breakdown, regardless of etiology.

There are various types of technics of sedimentation rate tests, the most commonly used being the Westergreen method which is read after sixty minutes. I, personally, prefer the Cutler method which is read every five minutes for sixty minutes. This method gives useful information as to the activity of a condition.

There are four types of reaction: 1, a horizontal line, which is normal; 2, a diagonal line, which is normal or indicates slight activity; 3, a diagonal curve which shows moderate activity; 4, a vertical curve which indicates marked activity. The slope of the curve is a more accurate index of the disease than the actual sedimentation rate.

FIG. 2.—Types of reaction.

Further Laboratory Findings

It is known and undisputed that rheumatoid arthritis patients suffering from stomach trouble frequently have hypochlorhydria or achlorhydria. I therefore will not spend time on that subject.

Uric acid in the blood is normal, contrary to increased findings during certain stages of gout. Serum albumin is decreased and serum globulin is increased in case of sedimentation rate. There is frequently decreased plasma cholesterol.

Jaffe and Bodanske (6) have proved that blood calcium is never changed in cases of rheumatoid arthritis.

There are two more tests which are sometimes helpful. One is the high agglutination titre for hemolytic streptococci; the other one is the positive complement fixation test for certain streptococci and staphylococci.

Some investigators did skin patch tests with certain streptococcus and staphylococcus vaccines. But those tests are practically no longer used because they are too unreliable. Of great diagnostic value are laboratory tests made with the synovial fluid. The following tests should routinely be done:

1. Cell count: The normal count is 50 to 200 per 1 cmm. In noninflammatory conditions (i.e., osteoarthritis) it is 200-2,000/1 cmm but contains mostly lymphocytes. It is up to 25,000/1 cmm in rheumatoid arthritis.
2. Smear. There is a great amount of red blood cells after recent injuries. There are bacterial findings in respective conditions: pneumococcus, streptococcus, gonococcus, etc.
3. Icteric index. It is normal in inflammation (5) and it is elevated after trauma (8).
4. Uric acid is increased in gout.
5. Culture.
6. Wassermann test.
7. Complement fixation tests for gonococcus, tubercle bacillus, streptococcus, staphylococcus, etc.
8. Guinea pig inoculation.
9. Weltman test for inflammation.

Often the synovial fluid coagulates and cannot be used for those tests. Therefore an anticoagulant must be added to the aspirated fluid.

Pathology in Microscopic Tissue Examination

There are signs of inflammation in the *synovial membranes:* lymphocytic infiltration, thickening of synovia, formation granulation tissue, hypertrophic membranes which are covered with soft, friable, red-gray tissue, the pannus, which speads over the joint cartilage.

The articular cartilage is unchanged in the first stage. Later, patchy or extensive areas of erosion are seen, exposing the underlying bone in severe cases. In the advanced disease there is severe destruction of joint cartilage. In the bones there is early atrophy of the articulating bones. The trabeculæ may be replaced by connective tissue. In the late stage one finds erosion of the articular surface of bones and cartilage. In the terminal stage there is fibrous or bony ankylosis.

The capsule is swollen and thickened by infiltration, and inflammatory reaction takes place, spreading from the synovia. Later, adhesions to articular and, periarticular structures develop. The final pathological features are undistinguishable from the final stage of osteoarthritis.

X Ray Findings

One finds generalized decalcification of bones, i.e., osteoporosis. There is often a decrease of the interarticular space. In certain cases there are punched-out defects in the subchondral bone. Other cases show capsular distention from intraarticular accumulation of excess fluid. Other x ray findings are synoval thickening and periarticular swelling.

Differential Diagnosis

The differential diagnostic features between punched-out areas in rheumatoid arthritis and punched-out areas in gout are: The gouty defects are always attached to the joint capsules. They are almost symmetrically located at the ends of the joining bones, inside the capsule of the joint. The gouty punched-out area is due to replacement by uric acid salt and is a foreign body reaction. Punched-out areas due to rheumatoid arthritis are usually small. They are not symmetrically located at the joining bones, and are not attached to the joint sapsules. The punched-out picture is due to the breaking off of the lateral wall of the inflammatory cyst. The punched-out areas due to rheumatoid arthritis are sometimes situated away from the joint space. We suggest the name "osteitis cystica rheumatica" for the picture of cyst formation due to rheumatoid arthritis in order to differentiate from other types of cyst formation in bones.

Summary and Conclusion

Rheumatoid arthritis is a typical picture. It is a clear-cut picture as seen by clinical, laboratory and x ray findings.

References

1. TAYLOR, D. T.: *Can. Med. Ass. Jour.*, 36:608, 1937.
2. COOKE and PONDER: Lippincott, 1927.
3. CLAIR and REISINGER: *Am. Jour. Med. Sc.*, 180:336, 1930.
4. STEINBROCKER and HARTUNG: *J.A.M.A.*, 100:645, 1933.
5. CUTLER: *Am. Rev. Tub.*, 1943.
6. JAFFE and BODANSKY: *Jour. Mount Sinai Hosp.*, Vol. IX, 5, 1943.

300 CENTRAL PARK WEST

THE RELATION OF THE STUDY OF THE HAND TO PSYCHOSOMATIC MEDICINE

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The research worker in psychosomatic medicine often refers to the ancients who were the first to associate mind and illness, but it is not often mentioned that it was their psychology and chiropsychology which helped the ancients to read accurately a sick man's personal identity. It was Hippocrates who discovered the correlation of the hand with the lung, as exemplified by what has since become known as the "Hippocratic finger". One of the first books printed after the invention of the Guttenberg printing machine was a book on palmistry by Aristotle, published in 1475, a copy of which is to be found in the New York Public Library.

While much has been written about Gestalt psychology, there is hardly any reference to be found in medical literature to the structure of the hand, one of the most expressive, most sensitive and most mobile parts of our constitution. The writings of the pioneer chiropsychologists, such as Friedemann and C. Wolff, have escaped the attention of the physician probably because the science of hand analysis has for so long been associated with charlatanry and fortune telling and because the claims of the ancients as well as of the modern chirologists are considered mythological and unjustified.

The contribution that chiropsychology may make to clinical medicine is only beginning to be appreciated. It is the contention of many psychologists, anatomists and other interested scientists, that a careful study of the hand could add immeasurably to our present method of psychosomatic diagnosis. In 1943, Bauer described the application of dermatoglyphics to criminology, anthropology, psychics, palmistry, pathology, embryology, genetics and clinical medicine. At the present time the study of scientific palmistry is being developed at Tulane University in New Orleans under the direction of Harold Cummins, professor and head of the department of microscopic anatomy. He has found that the finger prints of persons with schizophrenia are different from those with normal minds. The schizophrenics as a group have fewer whorls. The palms of these individuals have not been studied, but those of Mongolian idiots are so strikingly abnormal that a test is underway to learn whether the palms of the newly born may be used to diagnose this mental defect before it becomes otherwise certain.

C. Wolff, of the University of London, who is doing research work under the supervision of C. Burt and W. Stevenson, says that modern psychology has produced many valuable tests of intelligence, from the Binet test to the matrix test of Raven, but has so far failed to find a reliable method of testing temperament and character. He believes this gap can be filled, to a great extent, by a psychology of the hand.

It is well known that many internal diseases show manifestations in the hand. Daniel is convinced that "an alert clinician without recourse to instrument or laboratory test may often go far in diagnosing internal disease by an intelligent examination of the hand." In referring to Dupuytren's contracture, Power says, "when considered in its relationship with pulmonary or other visceral condition, it becomes of much interest, even assuming the rôle of an important diagnostic sign." Jelliffe compares a hand with Dupuytren's contracture to a "unique botanical specimen which offers an interesting study, while delving intensively into the unconscious life of a sorely tried individual seeking relief from an agony of apprehension and of a bodily distress; a unique type of hand specimen here would claim some moment of reflection and fragmentary recording." Draper's observation regarding the hand is significant. He states: "Our experience points to the fact that the greater the discrepancies between hand and body, the more likely is the person to be the subject of disease in structural rather than functional tissue."

To understand chiropsychology in relation to psychosomatic problems let us consider for example peptic ulcer, endocrine disturbances, schizophrenia, and heredity.

1. Peptic ulcer

Draper reminds us that the hands of the patient with peptic ulcer are long and gracile, and that the fingers are especially long. The hands are almost constantly in motion and are often used in gestures. He observes that ulcer patients are especially sensitive to emotional stimuli, are very nervous and possess the habit of worrying. These observations are significant from the point of view of the chiropsychologist who believes that the person with long, thin and especially tapering fingers are characterized by hypersensitivity; they are slow in action and decision; they love order, are fond of details and are inquisitive; they are inclined to worry about little, unimportant things. They get easily hurt by others and are therefore more subject to psychosomatic tendencies. The author agrees with Draper. He has observed that the palms of ulcer patients contain an abundance of crease lines which are the direct result of their subconsciously executed gestures and movements of the hand.

According to Wolff, "the more frequent and complex are a person's nervous and emotional stimuli, the more will emotional tension and nervousness be produced in him, and this will affect the scale and variety of his involuntary movements and gestures and will be registered in the accessory crease-lines of the palm."

We can safely assume that an abundance of crease lines (Fig. 1) indicates a highly strung, receptive and sensitive person and, in contrast, the absence of accessory crease lines (Fig. 2) signifies a lack of sensitivity.

2. Endocrine disturbances

The endocrine glands and their secretions have a distinct influence on the personality, but at the same time they do precipitate certain dystrophies in the peripheries, especially in the hand. These changes are well known and it is unnecessary to enumerate them.

According to W. Wolf, long, thin and tapering fingers are associated with the following diseases:

(a) Eunuchonism, in which self-consciousness, nervous and psychic symptoms are prominent.

(b) Fröhlich's syndrome. Wolf characterizes sufferers from this disease as day dreamers, sensitive and shy, but adds that they may easily become hilarious.

Fig. 1.—The abundance of crease lines shown on this hand indicate hypersensitivity.

(c) Hypoovarism. This condition leads to nervousness, mild depression, melancholia, irritability and extreme instability.

3. Schizophrenia

The strange posture of the hand, the gesture and handwriting of the mental defective are characteristic and so is the structure of the hand. Lewis describes the hand of a schizophrenic as follows:

1. Long, thin fingers with the ends tapering.
2. Movement of the proximal phalangeal joint restricted.
3. Thickening or "knots" at the interphalangeal joint.
4. The color of the hand is usually pale or bluish.
5. The hand is moist and usually cold.
6. The hands are generally kept out of sight.

Each of these characteristics has a definite chiropsychological interrelation.

1. Long, thin fingers, as mentioned previously signify sensitivity. If the ends are tapering, the hand is known as a "psychic hand" in chirology.

2. Whether the fingers are flexible or stiff is significant. Stiff fingers show an intense, passionate nature, one which might accomplish great things individually or as a leader but who cannot cooperate with others. Such people are intolerant, stubborn and tactless. Flexible fingers indicate impulsiveness, adaptability, tact, wit, cooperation.

3. Knotty fingers: The owners have a habit of analyzing everything or reasoning out all questions. Nothing is taken for granted, nothing accepted without proof. As a result such people are often discontented and skeptical, ever seeking their ideals and never finding them in this world. The overdevelopment of the third joint is often found in the hands of fussy housekeepers who are always trying to have everything clean and in order.

4. and 5. Color and temperature of the hand. Wolff states that the color and temperature of the hand are under the influence of the autonomic nervous system and provide valuable indications of a person's state of mind. The normal color is rosy yellow and the normal condition warm and dry. This state implies a certain ease and balance of mood. Hands which are habitually white or cyanotic, cold and moist are symptomatic in every person, not suffering from circulatory disease, of a melancholy state of mind or of a psychotic condition. Hands which readily sweat in response to emotional stimuli testify to definite emotional instability in their owner, especially among adolescents and at puberty.

6. A man who has little or nothing to conceal will not hide his hand. On the contrary, if he hides his hand from sight as he enters and crosses your office, it is an indication that he has ideas which he does not wish to have exposed. He is probably deceitful or hypocritical.

4. Heredity

Nassau, an observer of children's palms, writes: "The pattern of the lines of the palm furnishes a clue to the solution of the problem, whether a disturbance of development is hereditary or whether it has been brought about by influences which interfered with the regular development of the fetus. An abnormal pattern of the palm as an accompaniment of a congenital disease probably indicates a disturbance of evolution.

The work at Tulane University, referred to earlier in this paper, should add materially to our knowledge of the influence of heredity on the palm and fingertip patterns.

Fig. 2.—There are very few accessory lines on this hand; only the main flexure lines are visible. Such a hand signifies lack of sensitivity.

Friedemann approached the problem of heredity by studying the correlation between the form of the hand and mental illness. This work is of special interest to the mental chirologist.

I have studied more than a thousand hands, and agree with Wolff and Friedemann that from the form of the hand one may expect to derive a general impression of, 1, the physical constitution and the heredity and 2, the constitutional tendencies of an individual and his adaptability to his environment.

Benham and others maintain that there are several types of hands which represent certain strong qualities, aptitudes, virtues and faults as well as peculiarities of health and character. Each type was thus created for a specific sphere in life and the majority of people occupy the sphere for which they are best fitted. These people are adjusted to their home life, occupation, gastronomics, etc. If they are not, the problem of psychosomatic medicine presents itself.

For example, we have the square hand; the palm, the fingertips and the nails are square in shape. The owner of such a hand is a practical man with reasoning power. He is conventional and law abiding. He likes routine, order and system in everything, and consequently he is only happy when everything is done according to rule. Since he is law-abiding he cannot stand any dishonest business. He is sincere, affectionate, loyal but not demonstrative.

On the other hand, the possessor of a conic hand, in which the palm is conic in shape and the fingertips are tapering, is an idealist with imagination and an impulsive character. He is impatient, sensitive and sympathetic. To him regularity and routine are burdensome. He responds to beauty, harmony and artistic surroundings.

Discussion

Space does not permit the mention of several hundred illustrative cases which I have observed. Instead, let us review some of the theories held by various observers which could be relevant to chiropsychology.

The muscular development of an individual's hand, as well as its flexure or crease lines, is determined by its movements. If the movements are voluntary, they are related to conscious impulse and thought. The involuntary and the more or less expressive movements, the gesture and the reflex movements, emanate from the subconscious mind when they are stimulated by emotional or visceral impulses.

Mira agrees with Watson that even the most simple thought cannot be performed without altering in some way the muscular pattern, and with his myokinetic psychodiagnostic method he tries to prove his theory that "whenever the mental equilibrium is distorted, such distortion must be in some way detectable in the individual's movement".

C. Wolff's theory is complementary to that of Vashide who sought to show that both the hand and a certain part of the cortex of the brain retain imprints of muscular patterns formed by countless habitual repetitions of movement. He called these imprints "images motorique". Wolff adds to his idea of images motorique, the idea of a tactile image produced through all attributes of the sense of touch and represented in many areas of the cortex.

The close relation between the hand and the cortex is explained by the large area by which the hand is represented in the cortex. Grinker asserts that the area for the hand is broad and large and is finely organized and easily stimulated by the faradic current. Conversely, the hand is most affected in cortical lesions.

The importance of the palmar aponeurosis is recognized by Jelliffe, who writes: "It is not a simple connective tissue of unitary origin, but it is a compound of tendinous remnants from several phyletically more active muscles which at one time were largely under cortical voluntary and cortical and striatal spinal reflex activities."

According to Wood-Jones, the palm of the hand is not only a sense organ which conveys to the cortex a knowledge of environment but also is a portion of the external nervous system which conveys to the environment certain information about the internal nervous system.

Summary and Conclusions

1. Patients with certain diseases have long thin fingers and are sensitive to emotional stimuli.

2. The author has observed that in the palms of the majority of hypersensitive patients there is an abundance of lines.

3. According to the chirologist, long, thin, tapering fingers and a much lined palm indicate a highly strung, sensitive and receptive person.

4. The varying shapes of hands indicate their suitability to various kinds of environment. Education, religion, will power, and our responsibility to society can alter and make up, in a certain degree, for the constitutional tendencies, but when it fails under mental and physical strain the problem of psychosomatic medicine arrives. Binger states, "not the patient complains of his stomach, but the stomach complains of him." The chiropsychologist goes farther—our autonomic and central nervous system starts to complain, sabotage, and then finally breaks down.

References

BAUER, DONALD DEF.: Dermatography in medicine. *Jour. Bowman Gray School of Medicine*, 1:94-100, 1943.

BENHAN, W. G.: *The Laws of Scientific Hand Reading*. G. F. Putnam Son, New York, 1900.

BINGER, C.: *The Doctor's Job*. W. W. Norton and Co., New York, 1945.

CUMMINS, H.: *Fingerprints, Palms and Soles*. The Blakiston Company. Philadelphia, 1944.

DANIEL, T. B.: The value of the hand in physical diagnosis. *Jour. Bowman Gray School of Medicine*, 2:23, 1944.

DRAPER, G., DUPERTUIS, C. W., and CAUGHEY, J. L., JR.: *Human Constitution in Clinical Medicine*. Paul B. Hoeber, New York, 1944.

FRIEDEMANN, A.: Handbau und Psychosis. *Arch. f. Neur. u. Psych.*, 1928.

GRINKER, R. R.: *Neurology*. C. C. Thomas Publishing Co., Springfield, Ill., 1943.

JELLIFFE, S. C.: Sketches in psychosomatic medicine. *Nerv. and Ment. Dis. Monograph* No. 65, 4:36, 1939.

LEWIS, N. D. C.: Manic-depressive psychosis. *Proc. of Assn. for Research of Nerv. and Ment. Dis.*, 20:342, 1930.

MIRA, E.: *Psychiatry in War*. W. W. Norton and Co., New York, 1943, p. 142.

NASSAU, E.: Folds and creases of the skin during childhood. *Amer. Jour. Dis. Child.*, 66:615, 1943.

POWER, H.: Dupuytren's contracture one hundred years after Dupuytren. *Jour. Nerv. and Ment. Dis.*, 80:386-409, 1934.

WOLF, W.: *Endocrinology in Modern Medicine*. W. B. Saunders Company, Phila., 1939.

WOLFF, C.: *The Human Hand*. A. A. Knopf, New York, 1944.

WOOD-JONES, F.: *The Principles of Anatomy as Seen in the Hand*. The Blakiston Company, Philadelphia, 1920.

854 NORTH CLARK STREET

THE ELECTRICAL PATTERN OF THE SUPERIOR BRAIN

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The discovery that electrical waves originating in the brain could be tapped and made visible on a screen is one of the most remarkable accomplishments of modern science. Within the past few years a great many interesting facts have come to light by studying the electrical manifestations of the human brain.

Dr. P. S. Shurrager, of the University of Illinois, has found that the brain's electrical waves have their origin in the very life processes of the cells of the brain. Each single cell in the brain may in the course of its life process create electrical impulses which are added together to create the complex brain waves broadcast from the brain's surface.

The life process of the brain cell consists in the building up of negative electrical charges in the brain fluids which surround each cell until these negative ions become numerous enough to disrupt the membrane of the cell. When this happens, a spontaneous nerve impulse bursts from the cell and goes out along the nerve fibres. With this there is a neutralization of the negative charges in the surrounding fluids and the whole process starts again. Thus it repeats over and over.

Brain waves are visible indications of the inner secrets of the brain. They tell a great deal about the state of health of the brain, about its ability to formulate thoughts, and even about the mechanism of that elusive quality known as personality. Dr. Abraham Ber Gottlober, of the University of Iowa, has made a series of interesting studies which prove that personality depends a great deal upon the electrical activity of the human brain.

The two great divisions of human personalities are the extravert, the go-getter, the mixer, the man who loves company, and the introvert, the man who likes to be with himself, the thinker. The go-getter has brain waves which are distinctly different from those of the man who loves to be by himself. The go-getter's alpha brain waves are broadcast from fifty to one hundred percent of the time. The introvert has a smaller alpha wave rate, but his beta waves are superior to those of the good mixer and the extravert.

Similarly, the brain of the man of genius has its own electrical signature. It is as different and distinct from the brain waves of the man of ordinary talent as day is from night.

Dr. George L. Kreezer, at Cornell University, has been particularly interested in ascertaining the electrical manifestations of the superior brain. He has found that there is a direct correlation between the electrical brain records and intelligence. These findings further confirm that superior brain power is dependent, not upon one but upon a great many factors.

The question that Dr. Kreezer sought to answer was: Is there any association between the characteristics of the electrical brain pattern and the intelligence level? Why is one man a genius and another an idiot? What is the difference between an Einstein, a Freud and the masses of individuals that fill the hospitals for the feebleminded?

Attempts to discover the reasons for these differences have been consistently thwarted by the lack of adequate methods for the observation of activities in the living brain. Traditional methods were limited largely to the examinations of the structure of dead brain tissue, which really tells us very little. When Dr. Berger demonstrated that electrical brain records might be obtained from the living, a whole new field was opened up for research.

In Dr. Kreezer's investigations he has recorded the electrical activities in the brains of individuals ranging from the lowest extreme of idiocy (the intelligence level of an infant of six months) to the levels of very superior brain power.

The chief result, as reported by Dr. Kreezer, has been the discovery of a definite correlation between the characteristics of the electrical brain pattern records and the differences in intelligence levels. Thus, in one type of mental deficiency, the Mongolian type (socalled because these persons look like Mongolians), the alpha index (or the percentage of time that the alpha rhythm is present) increases progressively as the intelligence level increases. In Mongols of low intelligence, the alpha rhythm is present only a small percentage of the time; in Mongols of a relatively high intelligence level, this rhythm is present a large percentage of the time.

In another type of mental deficiency, the socalled hereditary type, the electrical brain pattern was reported to change with variations in intelligence. In this type, however, the change is reported to occur in the rapidity of the waves rather than in their incidence in time; as the intelligence level rises the speed of fluctuations increases.

The brain of the man of superior talent gives an electrical picture that is quite characteristic. The alpha rhythm is present consistently and is always at a very high level. There is a greater rapidity of all waves and rhythms.

This helps to give us a further insight into the composition of the superior brain. It is now agreed that the electrical activity of the brain is greatly modified by changes in its chemistry. Primarily changes in the blood sugar, blood oxygen and blood carbon dioxide of the brain also bring about alterations in the electrical pattern of the brain.

Drs. F. A. Gibbs, Denis Williams and E. L. Gibbs, who have been doing remarkable work in investigating the electrical currents of the brain have carefully correlated these changes with chemical reactions within the brain. Thus, the electrical manifestations of the brain of the idiot is due primarily to the sluggish chemistry within that brain, just as much as the electrical pattern of the brain of the man of genius is due to the rapid, nicely performed, chemical changes that take place in that brain.

Drs. Gibbs and Williams have found that when there is a fall in the carbon dioxide content of the blood that feeds the brain there is a shift in energy toward the slow side of brain activity. With an increase in the oxygen content of the blood to the brain there is a similar increase in brain activity which is manifested by electrical output.

The same is true of the blood sugar. Other chemical

substances may have similar or dissimilar effects. The results suggest that the electrical activity of the brain is a manifestation of the activity of a great number of chemical substances having different natural periods. Though differing in their periods, these oscillators tend to respond similarly to any given factor. A factor which affects one frequency tends to affect all frequencies in the same direction, though not necessarily in the same degree.

Closely related to superior brain power are the modes and channels by which information is transmitted to the brain. Primarily this is accomplished by the five senses, hearing, sight, smell, touch and taste. These special senses have specific areas of the brain set aside for their headquarters. A man of genius in the field of music will have his hearing center more highly developed than perhaps a genius whose field is that of painting. Such investigators as Drs. Adrian, Tonnies and Kornmüller have found that the size of the brain waves derived from the temporal region (the sides of the brain where the sense of hearing is located) are larger and of greater activity in musicians than in ordinary folk. In musical geniuses the brain waves in the sides of the brain are the most highly developed and most frequent because of the association of this centre to hearing and musical composition.

In that part of the brain known as the occipital region (the back part of the brain) is located the centre of the sense of sight. The brain waves in this region are largest and most frequent in men of talent whose field is painting. Thus, a genius like Rembrandt had a brain whose occipital region gave the greatest and most complicated electrical pattern, while the greatest electrical activity in a musical brain is located in the sides or temporal regions. Beethoven might have had such a brain.

The electrical pattern of the brain of genius is only now being unravelled. There is still a great deal to learn, and perhaps we will soon have a correlation of the electrical signatures of the different types of superior brain activity.

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SITOPHOBIA AND INANITION, AND THEIR TREATMENT*

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By his studies in alimentotherapy, which owes its introduction to his efforts, von Leyden has achieved immortal fame in medicine. The same may be said of S. Weir Mitchell, who at an earlier date published his well-known food and rest cure in the treatment of neurasthenia. Von Noorden followed with classical monographs on diseases of metabolism, showing that an adequate nutrition is of the greatest importance in the treatment of chronic affections. Many clinicians, including myself, followed in the footsteps of the above-mentioned authors. In 1893 I wrote an article entitled "Dietetics in Diseases of the Stomach" (1), and later another, "The Diet of Dyspeptics" (2), in which I emphasized that sufficient nutrition and frequently, in fact, overnutrition were essential in the care of a great many invalids.

This proposition at first sight seems so self-evident that a discussion of this subject would hardly be considered necessary. In reality, however, even physicians frequently sin against this fundamental truth of dietetics, i.e., sufficient alimentation. I have, therefore, thought it worth while to report on this subject from an extensive clinical experience, in order to illustrate the great importance of dietetics and its application.

Sitophobia

By the term sitophobia we understand a condition in which too little food is taken on account of fear. This fear relates to pains or disagreeable sensations in the digestive apparatus arising after meals. To avoid these, patients prefer not to eat, or rather to eat as little as possible. Sitophobia is most common in chronic affections of the digestive system, accompanied by pains (gastralgia and enteralgia). These are usually ascribed by the patient to various foods, and in order to avoid the pains, they exclude at first the coarser and later even easily digestible articles from their dietary, taking finally only small quantities of milk or broths. Sometimes sitophobia arises in consequence of an abnormal sensibility of the gastric mucous membrane (hyperesthesia ventriculi). This is but another variety of the cases just described; for even if in hyperesthesia of the stomach no severe pains are experienced, yet the ingestion of food causes disagreeable sensations which the patient is anxious to avoid.

A further group is formed by cases in which patients from false ideas, in the absence of pain, avoid food or limit its amount. Thus especially sufferers from intestinal disorders (3), afflicted with constipation or diarrhea, are afraid to eat heartily, because they think that the condition would be aggravated. To this class also belong all cases in which the patient for some reason or other on account of a certain ailment eats too little in quantity or variety, as, for instance, gouty people avoiding all meats, obese persons who do not take fats or carbohydrates, thereby injuring the organism.

R. von Hoesslin (4) regards sitophobia as a psychical condition. He says: "Such fears are not possible in perfectly normal people; for the expression 'phobia' presupposes the existence of an abnormal fear, based upon false ideas. If this fear is not abnormal, but justifiable—if, for instance, a patient suffering from acute enteritis is afraid to eat cabbage or prunes, or if a person who is always affected with urticaria after partaking of strawberries or lobster avoids these dishes—then we do not have to deal with a socalled phobia, but with a very sensible train of reasoning; but if this fear is abnormal, some psychic change has taken place. Sitophobia is, therefore, like all other phobias, of cerebral origin."

With reference to these remarks of von Hoesslin, I would reply that sitophobia is certainly found in people who do not suffer from any psychic disturbance. The

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patients are afraid to eat because they have pain afterward. This fear is justifiable; but in order to effect a cure it must be overcome, and, therefore, the treatment of this symptom (sitophobia) plays an important part.

Sitophobia, if left alone, leads to a partial, sometimes nearly total, inanition. A consideration of these conditions is, therefore, not out of place here.

Inanition

Inanition means loss of strength owing to deficient nutrition. This expression was first used by Chossat (5) to designate the atrophy resulting from food abstinence. According to Samuel (6), we must distinguish between complete and incomplete inanition.

Complete inanition.—Complete inanition of short duration (twelve to twenty-four hours) is often noted, as, for instance, in travellers who do not find an opportunity to obtain food during a voyage; also on fast days that are observed by many persons for religious reasons. Signs of weakness and various nervous symptoms (pains in the neck, severe headaches, vertigo) develop early and are especially marked after severe exertions. Prolonged periods of fasting are undergone either by shipwrecked people or by special professional fasters. The latter have been made the subject of important scientific investigations during the last twenty to thirty years. Our knowledge of metabolism during inanition is now almost complete, thanks to the labors of Zuntz and Lehmann (7), Luciani (8), and others.

It has been shown that during complete inanition the organism takes up as much oxygen as during normal rest, i.e., after digestion is completed, for during the latter state an increased amount of oxygen is utilized owing to the augmented activity of the digestive apparatus. During inanition the body consumes its own substance in order to maintain its temperature and its chief functions. It lives on its own flesh and fat and does not economize any more than it would under normal conditions.

According to von Noorden (9), the body during total abstinence burns up about one gram of albumin and 3.5 grams of fat per kilo of bodily weight per day. Samuel describes the symptoms of complete inanition as follows: "The feeling of hunger is most intense after twenty hours, and disappears after that; the feeling of thirst, however, remains until death. The mucous membranes become dry; weariness, weakness, and faintness are pronounced. The loss of weight is continuous. The mental faculties remain clear until the last. *Sub finem vitae* albumin and mucin appear in the urine. The temperature sinks to thirty degrees Centigrade during the last twenty-four hours, and death occurs amid extreme prostration, deep coma, at times delirium and convulsions. During absolute abstinence death supervenes between the twelfth and twentieth days. If water is taken, life may be sustained for forty to seventy days. Forty percent of the bodily weight is usually lost before death."

Incomplete inanition.—Incomplete inanition or subnutrition is frequently met with. In relatively few cases do we have to deal with conditions in which the organism is unable to utilize larger amounts of food (carcinoma cardiæ, seu ventriculi, seu pylori—extreme degrees of benign stenosis of the pylorus, infectious diseases during the febrile period). In most cases of subnutrition, however, we have to deal with conditions in which the organism would be perfectly capable of utilizing food if it were supplied to it. These are, therefore, conditions in which amelioration is possible.

Subnutrition begins as soon as the usual amount of food is diminished. The daily physiological quantity of food is about one hundred to one hundred and thirty grams of albumin, seventy to one hundred and twenty grams of fat, three hundred and fifty to four hundred grams of carbohydrates, two thousand five hundred to three thousand grams of water, and fourteen to thirty-two grams of inorganic salts. Besides we inhale seven hundred and forty-four grams of air. The total amount of new material that is daily ingested is about four kilos, or about one-fifteenth of the total bodily weight. Expressed in calories, the body needs daily for each kilo about thirty-five to forty calories during rest and forty to fifty during hard work. If less food is taken an incomplete inanition results, which manifests itself by anemia and loss of weight. Incomplete inanition, qualitatively—as, for instance, total abstinence from water, even such as occurs in solid food—leads, according to Samuel, to death just as quickly as complete inanition. On a purely albuminous diet the body fat disappears, and on a diet consisting of fats or carbohydrates alone the body albumin diminishes. A diet deficient in salts is badly borne. Digestive disturbances arise and nervous symptoms (trembling, muscular weakness) and death follow.

In practice we meet less often with a one-sided subnutrition (one deficient in a qualitative way) than with general subnutrition. The latter is encountered in the greater number of dyspeptics. I would like to cite here some examples from my practice as I meet them every week, in fact almost daily, in order to show how much less food dyspeptics take than the physiologically required quantity.

Case Reports

Case I. (March 15, 1903).—Mrs. Sadie M., aged thirty-eight years, complained for the last six years of pains about half an hour after meals, and much belching. She weighed formerly one hundred and sixty-eight pounds, and had decreased to one hundred pounds in five years. She felt weak, without energy, slept poorly, and had pains after meals. She feared to eat on account of pain. During the last four months she had lived as follows:

8 a.m.:	One cup of milk (200cc.)	128	calories
	One slice of stale bread (30 grams) without butter	64	"
12 m.:	One quarter pound of steak	125	"
	One potato (25 grams)	22	"
	Occasionally a half slice of stale bread	32	"
5 p.m.:	One eighth pound of steak	62	"
	Two slices of stale bread	128	"
	The patient took daily per kilo of body weight 12½ calories	561	calories

Case II. (September 24, 1902).—Mrs. F. H., aged thirty-eight years, complained for two years of a feeling of constriction in the upper abdominal region. Appetite was increased, bowels were regular. During the last year she had lost twenty-five pounds (weighing originally one hundred and twenty pounds and going down to ninety-five pounds. She felt very weak, being hardly able to walk up stairs.

During the last year the bill of fare of the patient was as follows:

8 a.m.:	One chop (30 grams)	37	calories
"	thin slice of bread (30 grams)	64	"
"	some butter (5 grams)	42	"
"	one cup of coffee with very little milk (39 cc.)	20	"
10 a.m.:	One cup of broth (200 cc.)	10	"
12 m.:	Meat (100 grams)	213	"
	potatoes (50 grams)	63	"
	string beans (30 grams)	100	"
	no bread.		
3 p.m.:	Cup of coffee with a teaspoonful of milk	3	"
	one slice of bread (30 grams)	64	"
7 p.m.:	Steak (100 grams)	213	"
	one slice of bread (30 grams)	64	"
	a little butter (5 grams)	42	"
10 p.m.:	Claret and one cracker (10 grams)	35	"
		970	calories

The patient was therefore taking food of a nutritive value of 22½ calories per kilo daily.

CASE III. (March 6, 1903).—Lena F. began to suffer a year ago from pains in the stomach, occurring one hour after meals. She was told by a physician to fast six days, i.e., not to take anything at all at first and later only a little liquid food. She did this and was reduced from one hundred pounds to eighty pounds. Afterward she slowly recovered and felt quite well for several months; she gained in flesh so that she weighed one hundred and four pounds. About four months ago the patient began again to experience pain in the stomach after meals; she ascribed this to various articles of food, and gradually eliminated one after the other from her dietary. She steadily lost in flesh and weighed but eighty-nine pounds when she first consulted me. Her diet then was as follows:

8 a.m.:	One slice of toast (30 g.)	64	calories
	One cup of milk (200 cc.)	128	"
10 a.m.:	One cup of beef tea (200 cc.)	13	"
12 m.:	One plate of soup (200 cc.) with rice (30 g.) or barley	100	"
	One thin slice of bread (30 g.)	64	"
	One ounce of scraped beef	30	"
3 p.m.:	One cup of milk (200 cc.)	128	"
	Two crackers (20 g.)	70	"
	Some butter (5 g.)	42	"
6 p.m.:	Beef tea (200 cc.)	13	"
	One slice of bread (30 g.)	64	"
	Scraped beef (30 g.)	30	"
	One saucer of farina (100 g.)	182	"
10 p.m.	One cup of malted milk (200 g.)	128	"
		1056	calories

As patient weighed eighty-nine pounds, she was taking on an average a daily amount of 26.4 calories per kilo.

These three cases suffice in order to show how gravely the nutrition of the organism must suffer if for long periods on an average only about two-thirds (sometimes even one-third) of the food necessary to maintain the equilibrium is taken. If we study the above figures nobody will be surprised that such patients steadily decline and complain of weakness and various nervous disturbances. What is rather to be wondered at is the fact that such patients linger so long in their miserable condition and do not succumb sooner.

Treatment

In complete inanition lasting twenty-four hours or longer, the treatment consists in carefully administering easily digestible fluid or semifluid food in not too large amounts. It is quite natural that the famished are inclined to devour greedily any food that is accessible. If, however, they take too much or too coarse food it readily causes serious trouble in the exhausted intestinal tract. The chief duty of the physician, therefore, consists in proceeding with caution and restriction with regard to the taking of food during the first few meals. If after eating, the exhaustion of the patient has disappeared he may then return to his usual mode of life.

The treatment of incomplete inanition or subnutrition is altogether different. Here we must first combat sitophobia, if it exists, because otherwise the existing malnutrition can hardly be removed. It is important to encourage the patient to eat in spite of the pain. Usually the latter is in reality not so severe, and in nearly all cases we will succeed after awhile in banishing the fear of food. Soon the patient can take ordinary nourishment. Even articles of diet which formerly caused severe pain are now tolerated without difficulty. The stomach, or rather the intestinal tract, seems to accustom itself to the greater demands made upon it.

It is, of course, advisable in some cases at the beginning of the treatment to diminish the sensitiveness of the digestive apparatus by bromides or similar drugs. These medicines are, however, not essential, but rather bridge over the first few days by facilitating the carrying out of the directions in regard to eating.

Another point of great importance is to improve the nutrition of the patient. At first we have to see that the patients take as much food as is necessary to maintain their equilibrium, and that no loss of weight occurs. This alone, however, is not sufficient for a complete cure; for many of these patients are very much run down, and while they will not lose any more weight with an amount of food that is just sufficient for their needs, they will, however, remain in their weakened condition. It is, therefore, very important that an increased quantity of food should be given, in order to make the patient gain in weight.

At first sight the accomplishment of this seems hardly possible. In reality, however, it is not so difficult, and can easily be done in most dyspeptic conditions (except carcinoma of the stomach and bowel).

In laying out a plan of alimentation the following points should be considered: The first change in diet must not be too great. If we have to deal with patients who have lived for a long time on fluid food only it is best to begin with liquid or semisolid food, as, for instance, milk; beef tea, raw eggs beaten up in milk, or broths, strained barley or oatmeal soups, gruels, and jellies. We must, however, see that a sufficient quantity of nourishment is taken. This light transitional diet should be increased daily by some article or other approaching more nearly to the ordinary bill of fare. At first soft boiled eggs, zwieback, tender meat, mashed potatoes, white bread, butter; later, light vegetables, boiled fruits, etc., are added.

As soon as the patients partake of the usual articles of food they should be instructed to eat about as much as their neighbors at table, only taking more butter (at first one-eighth, later one-quarter pound daily), and taking a glassful of milk and a slice of buttered bread regularly between meals. With a diet like this we succeed nearly always in obtaining an increase in weight. Thus in all the three cases mentioned above, which have been picked out at random from my journal, the patients gained even in the first few weeks after beginning this regimen.

The first patient (Mrs. Sadie M.) gained two pounds the first week; the second (Mrs. F. H.) fifteen pounds in five months after the beginning of the treatment; and the third (Mrs. Lena F.) gained three pounds in the first three weeks, and eight pounds in seven weeks after commencing treatment.

The increase in weight, of course, continues as long as this excessive amount of food is taken. At the same time we find a general increase in bodily strength, so that patients who were invalids for a long time and a burden to their families and themselves could again resume their work and become useful members of society.

Simultaneously with this strengthening of the body the original complaints, usually not due to organic lesions, can be at the same time removed by medical skill. Alimentotherapy, therefore, in these cases is the fundament of complete recovery.

References

1. Dietetics in Diseases of the Stomach. MEDICAL RECORD, June 24, 1893.
2. The Diet of Dyspeptics. *Ibid.*, January 1, 1898.
3. Sitophobia of Enteric Origin. *J.A.M.A.*, June 15, 1901.
4. Bemerkungen zu Dr. Max Einhorn's Artikel uber Sitophobe intestinalen Ursprungs. *Zeitschr. f. diatetische u. physikalische Therapie*, 1902, Bd. v. p. 529.
5. *Recherches experimentales sur l'inanition*, 1835.
6. Eulenburg's *Encycl. der Med.*, Bd. x. p. 320.
7. Bericht uber die Ergebnisse des an Cetti ausgefuhrten Hungerversuches. *Berl. klin. Wochenschr.*, 1887, p. 42.
8. *Das Hungern.*, 1890.
9. *Berl. Klinik.*, 1893, Heft 55, p. 1.

20 EAST SIXTY-THIRD STREET

GLYCERINE AND PENICILLIN

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With the increased availability of penicillin new and more effective ways for using this potent antibiotic are being elaborated. The purpose of this article is to indicate how glycerine, the familiar solvent, has kept pace with these developments and serves as an adjunct in penicillin preparations.

As was the case with the sulfonamide drugs, glycerine has proved especially useful in the formulation of penicillin products intended for topical application. Used in this way, it was found that a higher concentration and a more efficient antibacterial action could be obtained in the infected area, without the need for saturating the body to get a purely local effect. Glycerine-containing penicillin products have proved their worth, not only in the treatment of burns, cutaneous ulcers and dermatological infections, but also in the fields of ophthalmology and otolaryngology.

Safe and wholesome in itself, glycerine is an excellent solvent for many drugs and a good suspending agent for others, hence it is a standard, widely used vehicle for a long list of medicinal substances. Aside from this function, glycerine itself imparts emollient, softening effects, which, coupled with its lubricating and penetrating actions, makes it highly suitable for local uses. Its hygroscopic or humectant action helps to assure retention of the requisite moisture content under a wide range of conditions. Its sweet taste and palatability are also important factors that have proved useful in penicillin preparations, like lozenges and pastilles, intended for the local therapy of oral infections.

Mention of glycerine in conjunction with penicillin began in 1943, when all of the small stock of penicillin was reserved for the armed forces. At that time Robinson and Wallace (1) pointed out that there were many conditions, such as wounds, furunculosis, sinus infections, gonorrhea and other infections of the skin and mucous membranes, in which suitable penicillin preparations could be applied locally, without resort to the highly purified, carefully rationed stores of this drug. To this end they developed a penicillin-inoculated dressing for local use. This dressing was made by placing squares of gauze in a Petri dish and saturating them with a medium containing one percent yeast extract, two percent dextrose, two percent corn starch and two percent glycerine. This was autoclaved, inoculated with penicillium and allowed to develop at room temperature. Tests showed that a fair amount of penicillin was produced over a four or five day period and that a bacteriostatic condition could be maintained at the point of contact with the lesion.

Clinical applications of these penicillin-inoculated dressings were made with satisfactory results. Patients with acute and chronic pyogenic surface infections, which had not responded to other forms of treatment, showed clearing of lesions or marked improvement following local application of these dressings.

Vogel (2) described how such dressings could be made with less elaborate equipment, including ordinary kitchen ware. Using a penicillium culture supplied by Wallace, he also employed a medium consisting of dehydrated yeast, glycerine, corn starch and dextrose in water. Soon others began to report good results from these penicillin-inoculated dressings. Thus, Galloway and Hobson (3) obtained excellent results in twenty-four cases. Large burnt areas covered with pus were cleared in two or three days, and subsequent healing was rapid. Templeton (4) used the dressing in a number of cases of superficial ulcers, such as infected ulcers of the ulcerative pyodermas, and in treating a deep type of pyoderma. Excellent results were obtained in lesions due to local infections.

The need for such dressings disappeared as penicillin production began to catch up with medical requirements, but they were useful in bridging a gap. As supplies became more available investigators began to develop bases suitable for obtaining an efficient local action with penicillin. Rigid standards were set for such ointment or cream bases because of the need for maintaining the penicillin potency.

As was pointed out by Burns (5) in preparing a cream of penicillin for local application, the prime objective is to ensure that it is therapeutically active. It is also necessary that the base chosen be of smooth, soft consistency, be as close to neutral as possible, be able to withstand sterilization without undue separation and afterwards easily re-emulsify, and then be able

readily to absorb the aqueous solution of penicillin. To meet these standards he developed the following glycerine-containing base, which has proved itself therapeutically efficient as a penicillin cream:

Glyceryl monostearate	12.0
Ointment of wool alcohols	10.0
Spermaceti	5.0
Liquid petrolatum	2.0
Glycerine	3.0
Chlorocresol	0.1
Distilled water, to make	100.0

Dissolve the chlorocresol in sixty-five parts of distilled water with the aid of heat and add the glycerine. Melt the glyceryl monostearate and add the wool alcohols ointments and the spermaceti and, when melted, add the petrolatum. Add this to the aqueous solution with constant stirring and incorporate enough water to make one hundred parts. Chlorocresol, included as an antiseptic to overcome any contamination which may be introduced when the cream is used as a stock preparation, should be omitted when the cream is to be employed in the treatment of ophthalmic conditions.

To prepare ten grams of penicillin cream (containing five hundred units per gram), nine grams of the base previously mentioned may be put in a half-ounce jar, and with the closure (preferably nonmetallic) placed lightly on top, autoclaved at twenty-pound pressure for twenty minutes. When cool, but not yet set, add a solution of penicillin, prepared by adding one cc. of sterile water to a five hundred unit ampoule of penicillin. Screw the cap down firmly, shake vigorously until the penicillin is thoroughly incorporated and immediately place in a refrigerator.

This ointment has been used extensively at the Royal Adelaide Hospital in Australia, and has proved therapeutically effective. Tests showed that in such a base, penicillin retains its potency for an extended period, one sample, stored at 0°C. still being in good condition after four months. To determine the time the cream would retain its potency under extreme conditions one sample was carried in a pocket and tested at regular intervals. For six weeks it remained sufficiently potent for therapeutic use. From then on it gradually lost its antibacterial activity, until at ten weeks its potency ended.

Of definite importance with regard to penicillin potency retention are the indicative tests run by Templeton and his associates (4) on six bases. These included three oil bases and three washable, water-soluble bases. Of the three latter bases, glycerine was stated to be a constituent of two—a pectin base and a lanette-like base. These investigations showed that of all the bases tested, the glycerine-containing pectin base retained the largest proportion of its penicillin activity at refrigeration temperatures of all six bases tested. This base gave a seventy percent penicillin recovery after eight weeks' storage at 8°C. When kept at 22°C., it was possible to recover forty percent of penicillin after four weeks, but at six weeks only a trace remained and none was present at the end of eight weeks.

The pectin base used in these studies was prepared by incorporating five percent of pectin, twelve percent glycerine and 0.1 percent methyl parahydroxybenzoate in isotonic solution of three chlorides U.S.P. As with all bases tested, the penicillin content was five hundred units per gram.

Although lanette wax, SX, a British proprietary product, is preferred by many British workers as a base for making penicillin creams (6), a lanette-like base prepared by Templeton and his associates did not rate particularly high in their tests. Since this wax is apparently not yet available at this writing in the United States, it is worth noting that a substitute glycerine-containing cream with similar physical properties was prepared by these workers. This lanette-like base consists of:

Cetyl alcohol	14.5 percent
Sodium lauryl sulfate	0.5 percent
Glycerine	5.0 percent
Water	80.0 percent

Results of these various studies suggest that as high a water content as is feasible should be employed in order to permit diffusion of penicillin from the ointment. This point has particular pertinence when one considers that outstanding hygroscopic action inherent in glycerine.

Penicillin ointments have found rather extensive use in ophthalmology. As remarked by Bellows (7), the local application of penicillin is highly effective in external ocular disease; such use leading to a high concentration of the drug in the tissues. Ointments recommended by this worker for use in ocular infections are simple ointment, oil-in-water emulsion and lubricating jelly, the last two containing glycerine. To ten grams of each of the ointments is added 25,000 units of penicillin dissolved in 0.25 cc. of water. The simple ointment is composed of wool fat, white wax and white petrolatum. The oil-in-water emulsion consists of:

Sodium lauryl sulfate	1.0 percent
Stearyl alcohol	10.0 percent
Cetyl alcohol	3.0 percent
Spermaceti	10.0 percent
Glycerine	15.0 percent
Water	61.0 percent

The lubricating jelly base is made along the usual lines and consists of tragacanth, quince seed extract, glycerine and aromatic oils, with sodium ethyl mercuric thiosalicylate 1:1,000 as a preservative.

Penicillin supplied locally has proved highly efficient in treating a variety of mouth and throat infections such as Vincent's disease and tonsillitis. Although various methods of applying penicillin locally have been advocated, it is quite generally agreed that incorporation of the drug in a suitable, slowly dissolving lozenge or pastille provides one of the most effective means for obtaining a prolonged local antibacterial action. Since glycerogelatin bases have long been used to make medicated lozenges or pastilles, it is not surprising to find this application extended to penicillin products. Illustrative is the following base suggested by Jeram (8):

Gelatin	100 Gm.
Glycerine	150 cc.
Water	61.0 percent

The base is sterilized in closed screw-capped containers in an autoclave or by other means, avoiding unduly high temperatures. The base is then cooled until it is just fluid enough to incorporate the penicillin dissolved in a few cc. of water. The temperature at this stage is about 42°C., which allows easy pouring into a mold. Although suitable molds are available commercially, excellent pastilles can be made by pouring the product into a sterilized tin lid previously lubricated with sterile liquid petrolatum. If a flat lid measuring four and one-

fourth by four and one-fourth by five and one-half inches is used and the sides marked off into eight equal parts, sixty-four pastilles of convenient size will be obtained. Depending on the amount of penicillin specified, each pastille will contain from two hundred and fifty to one thousand units.

After a thorough study of a number of bases, Nussle (9) came to the conclusion that plain glycerinated gelatin (U.S.P.) is the most suitable base for the preparation of penicillin lozenges. Using this as a basis, the following formula and method was used:

Gelatin (sheet or granular)	800 Gm.
Glycerine	640 cc.
Penicillin	400,000 units
Sterile distilled water	20 cc.

Pour on the gelatin sufficient distilled water to cover. Allow to soak for about fifteen minutes, and pour off excess water. Place the glycerine in a tarred dish of about two thousand cc. capacity and add the wetted gelatin. Heat the mixture on a water bath until the gelatin is dissolved and water evaporated off to make 1,600 Gm. of product. Remove from heat and let cool. Meanwhile make a solution of the penicillin in about twenty cc. of sterile distilled water. When the gel has cooled to about 65°C, stir in the solution of penicillin to obtain a uniform mixture. Immediately pour the mixture into a suitable size tray and refrigerate on a level surface to form a mat of uniform thickness. Cut into four hundred equal sized lozenges and store at 5°C. Each lozenge so formed has an average weight of four grams and a penicillin content of one thousand units.

As an alternate to this procedure, Nussle suggested that the following agar gel might be employed when gelatin was not readily procurable.

Agar, granular	30 Gm.
Simple syrup	875 Gm.
Glycerite of starch	350 Gm.
Penicillin	400,000 units
Sterile distilled water	20 cc.

As with the glycerinated gelatin base, this quantity of agar gel provides four hundred pastilles each weighing about four grams and containing one thousand units of penicillin.

In the field of otology, glycerine has been suggested as the sole vehicle for making ear drops of penicillin. According to the recommendations of the Professional Relations Committee of the Kings County (New York) Pharmaceutical Society, suitable ear drops can be made by incorporating ten thousand units of penicillin in ten cc. of glycerine. It is advised that the quantity prescribed by doctors should not exceed a ten-day supply. It is also noted that refrigeration is preferred but is not essential.

References

1. Robinson, G. H. and Wallace, J. E.: *Science*, 98:329, 1943.
2. Vogel, J. A.: (through) *Science New Letter*, Nov. 27 and Dec. 4, 1943.
3. Galloway and Hobson: (through) *Quart. J. Pharm. & Pharmacol.* 17:67, 1944.
4. Templeton, H. J., Clifton, C. E. and Seeberg, V. P.: *Arch. Dermat. & Syphil.* 51:205, 1945.
5. Burns, G. L.: *Australasian Jour. Pharm.* 26:34, 1945.
6. Lesser, M. A.: *Drug and Cosmetic Industry.* 57:44, 1945.
7. Bellows, J. G.: *Am. Jour. Ophthal.* 27:1206, 1944.
8. Jeram, P. J.: *Chemist and Druggist.* 144:254, 1945.
9. Nussle, J. A.: *Am. Jour. Pharm.* 117:272, 1945.

11 West Forty-second Street

AN UNUSUAL CASE OF PHENOBARBITAL POISONING

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The patient, a young woman, F. C., aged twenty-four years, was admitted August 17, 1945, to the Norwegian American Hospital, under the service of Dr. M. M. Corbett. She was profoundly under the influence of some drug and a developing bronchopneumonia.

The history, which was obtained at time of admittance, was that the patient had been on a boat ride Wednesday, returning home about 10:30 p.m., and because of a severe depression, for no definite reason took three boxes of phenobarbital tablets (one and one-half grains). It was definitely known that one box contained forty tablets and from her statements, taken before leaving the hospital, it was inferred that each box contained the same number; therefore, she had taken from 120 to 180 grains of phenobarbital.

The patient was found asleep Thursday morning by her sister and was still in a profound sleep when the sister returned home from work in the evening. On Friday, the family became alarmed because they could not arouse her and that evening she was brought into the hospital in a comatose state.

On admittance, the patient was given a gastric lavage; 0.5 gram of caffein sodiobenzoate every three hours; twenty thousand units of penicillin every four hours; picrotoxin injections and oxygen inhalations. The following morning after admission the picrotoxin was increased and she was receiving intravenous feedings of glucose, ten percent.

As the patient had failed to respond to treatment by noon on Saturday, the senior author (W.D.McN.) was called in consultation. A physical examination which was made at that time revealed an unconscious young woman, with a pale, sallow complexion; breathing was noisy, shallow and of the abdominal type. The pupils of the eyes were round and equal and did not react to light and accommodation. The mouth was filled with a frothy mucus, the larynx was filled with mucus and the vocal cords were hypersensitive and spastic. There was no expansion of the chest. The heart sounds were normal but difficult to ascertain because of the breath sounds. The blood pressure was 90/50; temperature 103.4° F.; pulse rate 145 and respiratory rate 46. The patient was placed in an oxygen tent, and given stimulants; five percent glucose in normal saline solution intravenously, and intravenous injections of picrotoxin were continued.

The following morning the temperature was 105° F., pulse rate 160 and respiratory rate 46. The blood pressure was 120/80. The patient's skin was very warm

and moist, respirations were stertorous and breathing fairly well obstructed.

Treatment

Tracheal and pharyngeal aspirations were performed at hourly intervals and at first a rather marked amount of thick, purulent, tenacious material was obtained. Auscultation of the lungs and palpation revealed marked pulmonary edema and the eyelids were also edematous. The patient was given one ampoule of salyrgan and one-half gram of sodium sulfadiazine. She was also receiving intravenous feedings of ten percent glucose in distilled water. Because of the temperature not yielding to penicillin, sulfadiazine was administered. Picrotoxin was given intravenously at one-half to one hour intervals. After the patient had received 186 milligrams of picrotoxin, a swallowing reflex and slight moving of the arms was noticed. This was about 7 p.m. of the second hospital day.

On the third hospital day, the supply of picrotoxin was temporarily exhausted and 1400 milligrams of metrazol was administered intravenously in 200 milligram doses. Several bullæ appeared on the heel and dorsum of foot and an urticarial lesion appeared on the elbow.

On the fourth hospital day, the respirations were deep and regular, rate 24; pulse beat was stronger, rate 106; and the temperature was 102.8° F. The pupils were small and reacted to light.

The patient was still in a comatose state on the fifth hospital day, but would react after each injection of picrotoxin. Reflexes gradually returned. The breath sounds were less harsh and friction ribs were present bilaterally but less extensive. The general appearance and condition of the patient seemed improved.

Oxygen inhalations were discontinued on the sixth hospital day but the patient was still receiving injections of picrotoxin. About 4:30 p.m. of this sixth hospital day, the patient opened her eyes and talked irrationally for a short time and then fell asleep again. About 10 p.m. the patient's condition became worse, with an elevated temperature of 104° F., a pulse rate of 116 and a respiratory rate of 30. She failed to respond and was in a deep comatose state. Examination of the chest revealed that there were patchy areas of dullness and relative hyperresonance throughout both lungs, especially on the right side.

On the seventh hospital day, the patient appeared to be developing an agranulocytosis, so the sulfadiazine was discontinued. Pentonucleotide, one ampoule for three doses and a blood transfusion, were given. Due to a weak pulse, digifolin was given intravenously for three doses. From this time on, the patient gradually improved.

On the eighth hospital day (the tenth day since taking the drug), the patient was definitely awake and recognized her father and talked with him. She later admitted that she had tried to commit suicide because of a depressed state of mind.

On the following day, she was very confused and talked incoherently at times, stating that she did not want to live. She complained of pain in her chest. Examination of the chest revealed that there were harsh breath sounds in the base of the left lung.

On the eleventh hospital day, the patient was much improved; temperature 100° F; pulse rate 88 and respiratory rate 22. She complained of difficulty in swallowing (probably due to frequent tracheal aspirations). Examination of the left side of the chest was fairly clear on auscultation and palpation; on the right side, some impaired resonance of the posterior lower lobe and some high pitched breath sounds in this area. The patient was still coughing at times; bullæ were still present; the mental condition was much improved.

On the fourteenth hospital day, momentary periods of rather marked depression were noticed.

Laboratory Studies

An examination of a catheterized specimen of urine, on day of admittance, gave a high specific gravity of 1.026; no albumin or sugar but a trace of acetone. On the third hospital day the urinalysis report showed a four plus albumin and blood. On the seventh hospital day the urine report showed a four plus acetone and blood. The albumin and acetone were gradually reduced and when the patient was dismissed from the hospital, the urinalysis was normal.

Chemical examination of the urine showed the following:

DATE	PHENOBARBITAL MILLIGRAMS PER 100 C.C.
3rd day of intoxication	.4
4th " " "	.2
5th " " "	.2
6th " " "	.12
7th " " "	negative

The blood examination, upon entrance, gave a hemoglobin of 96.6 percent; red blood cells 5,590,000; and white blood cells 12,800. The neutrophiles for the first three days were eighty-three to ninety-five percent; then dropped to fifty-eight percent on the fifth hospital day, returning to seventy-one to eighty-seven percent on the next four days. The blood count was practically normal the last three days. The x ray report of the chest, on August 24th, showed a rather marked congestion of the right lung. There was no definite consolidation of either lung. Roentgenological examination of the chest on August 29th, showed the diaphragmatic and cardiac angles to be clear. The heart borders were normal. The hilus markings were slightly increased, particularly on the right side. In comparison with the first film there was less congestion of each lung.

Summary

This case was of interest as we were dealing with a patient who had not received medical care for a period of forty-two and one-half hours; was admitted into the hospital in a comatose condition with a bronchopneumonia and recovered from an enormous ingestion of phenobarbital.

The greatest aid in recovery was the steady administration of picrotoxin; 876 milligrams being administered during a six day period. The continuous intravenous administration of ten percent glucose in distilled water, also aided in detoxifying the phenobarbital. The use of salyrgan theophylline in lessening the pulmonary edema and the inhalations of oxygen, also were important therapeutic measures.

In another case, where over three thousand milligrams of picrotoxin had been given, the complication of bronchopneumonia was not present.

4753 BROADWAY

Editorials

Black Market Gastrointestinal Disturbances

It has been reported that gastrointestinal disturbances exist widely throughout the United States, the number of cases being far in excess of what is usually found. A cursory examination reveals that a great many of these upsets can be traced to eating black market meats which have not been inspected and to the ingestion of butter which is either too old or has been improperly handled, poor refrigeration, excessive storage time, and careless initial preparation of the product.

It seems a tragedy that we should make large numbers of our population ill in a scramble for profits and an avoidance of the proper channels through which foodstuffs are handled. The lust for profits and the evasion of laws have been responsible for many evils. As long as the quarrel between the OPA and the dealers did not affect the health of our people, we stayed out of the controversy, but now that it is known people are becoming sick, we feel we have a right to say something about the matter.

Many arguments have been brought up—the question of free enterprise against government regulations on the one hand, and a more equitable distribution of our available supplies on the other. The farmer, the packing house, the wholesaler and the retailer, all want their share of the profits. Apparently the government regulations have somewhat lessened these when the products were handled through legitimate and normal channels. Now we have black market operations which neither protect the public from excess profits or poorly inspected products nor provide for an equitable distribution.

Furthermore, it brings a new note into the picture of American industry where the entire operation is carried on outside the law. We had a similar "noble" experiment during prohibition which resulted in undercover operations where the thirsty were supplied with varying qualities of liquor with resultant high prices, frequent blindness and paralysis. The attempted regulation of our drinking habits proved to be exceedingly bad for large numbers of our population who did not abide by the law and extremely unhealthy physical as well as psychological situations resulted—and so it is with our eating habits.

The purpose of our existing legislation is quite different from those of prohibition, but the results are much the same. Foods of inferior quality with the resulting physical and psychological unhealthy situation. Speaking of the psychological situation, the harm is not done so much to adults, who are encouraged in carrying on black market operations from the original farmer or rancher to the ultimate consumer; they are all involved. Every phase of the operation is an underhand one, and the worst of the evil is the example shown to the young people who see these operations going on, hear them discussed, and are led to believe that illicit operations, which are sanctioned and indulged in by their elders, can be reduplicated with impunity in other lines of their endeavor.

We consider the situation decidedly unhealthy from both physical and psychological points of view.

Present Trends in the Science and Practice of Medicine

The Columbia Alumni News for March 1946, publishes the text of an address which was to have been given on Alumni Day, but the program for a get-together luncheon was cancelled because of the desire to conserve food, and so the talk was not made. However, there are so many items in it which are of interest to the medical profession that we shall try to summarize what Dean Willard C. Rappleye has written.

Public health is now recognized as a matter of great interest to all, and not merely to the medical profession or any other special group. Although progress has been made, there is still too much illness and too many "defects", especially among the youth of our land. The period from age eighteen to thirty-eight should be one of abundant health and physical fitness, and yet some thirty percent of those called for military service were declared "unfit." Again, we have to recognize that prevention of disease and early correction of physical defects are not widespread, but limited, chiefly, to large centers of population. With ease of transportation by automobile and good roads almost everywhere, this situation can be explained only on the basis of neglect by parents to bring their children to medical centers for diagnosis and treatment. The "cure" for that state of things is "education" through local societies, schools and clubs.

The alleged high cost of medical care may be one reason for neglect, and yet it is small in comparison with other expenditures, and with the great good obtained. This, also, has to be told. Dr. Rappleye says that: "Over fifty percent of the total cost of medical care is borne by ten percent of the population. Approximately, four percent of the families . . . bear more than one-half of the total cost of hospitalization and surgical operations." Obviously, the total costs should be spread over as wide an area as possible.

Illness is a problem of all mankind. A sick or disabled person is a drag on his kith and kin and upon his locality; therefore, "social security" is a social necessity.

There is nothing new in all this, basically, but modern methods of approach are under experiment and

many of them are found wanting. The French, in 1794 advocated voluntary local plans. The Germans under Bismarck, in 1881, tried to make the effort national in scope. Great Britain in 1911, and France in 1930 began to study the matter more intensively. Then came World War II.

In these days, the trend is toward national programs administered locally through various groups, some of them under subsidy, but nothing short of complete coverage for every member of a family is going to become adequate. We Americans have at hand some two hundred million people in Europe who will make great demands on all of our resources. They must produce whatever they need for physical comfort just as soon as the rubble of their civilization can be swept away and a new start made, but guidance must come from the West. We, instead of profiting by experience, are prone to adopt a trial and error method in almost everything, and so, too, in health planning. For example, the fee-for-service set-up has proved inadequate and unworkable and trial in some three hundred to four hundred medical care plans has brought disappointment.

Specialization in medicine has grown enormously, but not always for the good of all concerned, because of shortsighted policy in regarding important social and other needs of the patient as "out of my field". We treat the immediate condition, but not the patient as a whole, nor with an eye to systemic disease which may be causing local disabilities. Relief for this kind of myopia is group practice where all symptoms and signs are recorded and integrated so that anyone may study the whole puzzle after the jig-saw pieces are put together. But this calls for well trained personnel beyond the limits of a given specialty—a background of general medical information. Today, in dealing with acute diseases we must make an early diagnosis, institute prompt and adequate therapy and carry through. Every chronic disease was once acute, and is in some sense a reproach to the patient or to his doctor advisor, bearing in mind that one can neither prevent nor cure *every* condition that presents itself.

There is a growing group of bodily ills which beset workers which we classify under the head of industrial medicine. Good books on this phase are coming frequently from the press, based upon actual experience of physicians whose daily round has to do with occupational disorders. Dr. Rappleye says that health and industrial insurance, prepayment hospital plans, etc., cover some seventeen million persons, and yet only about five percent of persons outside of this group have medical insurance protection.

Spreading the costs of maintaining good health over the entire population is the only fair way to insure success, but to begin we must have subsidies or underwriting to make sure that general coverage is complete. Any good plan must enlist the interest of labor, business, the professions, in fact *all* citizens, but the management of the overall set-up should be through the medical profession. Otherwise, there is danger of the doctor becoming a mere hireling, and that would certainly destroy his initiative and cause him to suffer indignities which he could not and would not take.

In conclusion, this well-informed dean states: "The country needs wise, courageous leaders in medicine cooperating with industry, labor and the public . . . if we are to avoid the errors and mistakes of the last sixty years in Western Europe. We must develop plans for medical services which will be suitable for the needs of American society".

Anesthetics

It is now one hundred years or thereabouts since anesthesia, considered from a modern point of view, was discovered. Pain was relieved, if not banished, in ancient times by the use of drugs. "Poppy and mandragora" were mainly employed in Asia, presumably the seat of the earliest civilization. Such soporifics were only used sporadically, however, and our ancestors had to bear ordeals of suffering without any aid of this description.

The discovery of true anesthesia was an American gift to medicine, and the word itself was coined by Oliver Wendell Holmes. In 1799 Humphry Davy had noted that inhaling nitrous oxide, laughing gas, overcame pain for a time, while Michael Faraday in 1815 had observed that inhalations of ether had a somewhat similar effect, and here the unsolved problem rested. Some years later a Shropshire country doctor, Hickman, suggested that a form of anesthesia, namely, the inhalation of carbon dioxide and nitrous oxide gases, might be employed to deaden pain in surgical operations. No heed was paid to his suggestion. In 1842 an American country doctor, Crawford Long, performed an operation under ether. Again, this result was not made public, even to the medical profession generally. In 1844, Horace Wells, a dentist in Connecticut, extracted a tooth painlessly using nitrous oxide.

William Thomas Morton, at that time Wells's partner, later went to Boston and became interested in the possibilities of abolishing pain in dentistry. He continued to explore the matter and following the advice of Dr. Charles Jackson used sulphuric ether in extracting a deeply rooted tooth. Morton then persuaded Dr. John Collins Warren, of the Massachusetts General Hospital, to give this anesthetic in an operation on a "congenital but superficial vascular tumor immediately below the jaw on the left side of the neck". The anesthetic acted most effectively and on the following day a large fatty tumor was removed by

Dr. Hayward, Morton giving the anesthetic, with complete success. On November 18, 1846, the discovery was made public in a paper by Henry J. Bigelow, published in the *Boston Medical and Surgical Journal.*

In the meantime, Robert Liston, the Scottish surgeon, amputated a thigh at the University College Hospital, London, Joseph Lister, nineteen years old, being present as a medical student. Syme employed it in Edinburgh in 1847, and Pirogoff, the great Russian surgeon, wrote a small manual on etherization in 1847, based on his Crimean experiences. Thus the discovery of true anesthesia was made in the United States one hundred years or so ago. A discovery which needless to say has revolutionized the practice of surgery.

In Britain ether as an anesthetic was not recognized generally. Its chief supporter was James Young Simpson, of Edinburgh, one of the ablest gynecologists and accoucheurs of his time. Simpson was not satisfied with ether as an anesthetic in his special line of work and substituted chloroform for it. He was so greatly impressed by the merits of this drug in actual obstetrical work, after satisfactory tests, that he published his results and adopted chloroform as his anesthetic. Although the use of an anesthetic was denounced in the pulpit and press throughout Scotland, Simpson held his ground, and it was not long before chloroform was employed generally in Scotland and parts of England. However, although chloroform held sway to some extent, it has been found that it is neither as adequate nor as safe as was hoped, so that numerous anesthetics came into vogue, including local ones. Thus at the present time we are well supplied with deadeners and relievers of pain to suit operations of every kind and wherever situated. Ether is still used, as a rule in combination, while chloroform has gone out.

Anesthesia is a boon from two points of view. For the relief of or immunity from pain it was, of course, a precious boon in surgery, but when considered from all aspects, the time element was more important. Slapdash surgery did not give time to think beyond the expediency of rapid surgery. With the coming of anesthesia there was time to do an operation thoroughly and conservatively. S. Weir Mitchell said of anesthesia that it was the "Death of pain, but it was much more than that; it enabled the operator to do his work in the most efficient way for the future of his patient."

Exophthalmic Goiter

The most obvious and marked mental characteristic of exophthalmic goiter is emotional instability. Its oncoming is marked not only by the physical appearance of the patient, but by mental emotional instability. The patient appears to be in a state of terror, anger or both and fearful of impending happenings, and is irritable, worrying and anxious. Sleep is often bad or uncertain and hysteriform functional symptoms may occur at intervals. In some instances mental delusions or confusional disunity accompanied by hallucinations, mania or melancholia, especially of the anxious variety, may be encountered. However, such conditions are fleeting and at most, last but a few days or weeks and rarely become chronic. There are cases, showing no enlargement of the thyroid and exophthalmos, in which the cardiovascular and nervous symptoms of Parry's disease are present. But it cannot be affirmed decisively that this syndrome is essentially the same as that of exophthalmic goiter.

Radical treatment by surgery is sometimes useful, but in any event careful attention to general nutrition is of the first importance, and on account of both cardiac and nervous symptoms exertion should be limited.

News Items

Ewing Memorial Lecture.—The annual James Ewing Memorial Lecture was delivered at the New York Academy of Medicine on Thursday evening, May 2nd, by Dr. Howard T. Karsner, director and professor of pathology, Western Reserve University School of Medicine, Cleveland, Ohio. His subject was "Tumors of the endocrine glands".

National Board of Health.—At a meeting of the Section of Historical and Cultural Medicine held at the New York Academy of Medicine on Wednesday evening, May 8th, Dr. Wilson G. Smillie, New York, read a paper on the "National Board of Health (1872-1876) and Its Relationship to National Planning for Health in the United States".

Harvey Lecture.—The seventh lecture in the series presented by the Harvey Society in affiliation with the New York Academy of Medicine, was given on Thursday evening, April 18th by Dr. Ernst Laqueur of the Institute of Pharmacotherapy, Amsterdam, Holland. The subject was "Interrelationships between gonadotropic and sex hormones". This lecture took the place of the second stated meeting of the Academy for April.

Awards to Staff Members of Army Medical Library.—Six members of the staff of the Army Medical Library have been cited by the War Department in recognition of their ability and faithful service to the Medical Department of the U.S. Army during wartime. Two members of the staff of the Medical History Division, which is located in Cleveland, also received the award. The citations were presented on March 15th.

Gynecology and Obstetrics.—At a meeting of the Section of Obstetrics and Gynecology of the New York Academy of Medicine, held on Tuesday evening, April 23rd, the subject of "Developmental anomalies in gynecology" was discussed by Dr. Robert J. Lowrie and Dr. Sydney Siegel, with a demonstration by lantern slides. Dr. Edward H. Dennen read a paper on "The choice of instrument in delivery with forceps", which was illustrated by motion pictures. A general discussion followed.

Grant for Nutrition Research.—It has been announced that a grant of $1,000 has been made to the University of Cincinnati by the Winthrop Chemical Company, which will be used to support investigations on nutrition carried out during 1946 under the direction of Dr. Tom D. Spies.

Causes of Sudden Death.—Dr. Alan R. Moritz, professor of legal medicine, Harvard University School of Medicine, an honorary consultant to the Army Medical Library, and Captain Norman Zamcheck of the Medicolegal Pathology Division of the Army Institute of Pathology, are making a study of sudden death within the military age group, according to a report published in *Army Medical Library News*.

Physicians' Dinner for United Jewish Appeal.—More than five hundred physicians attended the annual dinner of the Physicians Division of the United Jewish Appeal of Greater New York Thursday evening, April 4th. Honorary chairmen of the division are Dr. Emanuel Libman, Dr. Burrill B. Crohn and Dr. Abraham J. Rongy.

The Borden Awards.—Eight American scientists have received the Borden Awards of a gold medal and $1,000, for outstanding contributions to scientific research in the food industry and related fields during 1945. This brings to forty-seven the total number of awards made since their establishment by the Borden Company in 1936. Designed to recognize and encourage outstanding research achievements, the awards are administered by seven professional and scientific associations, which include the American Chemical Society, American Institute of Nutrition, American Academy of Pediatrics, and the American Veterinary Medical Association.

Women's Medical Society.—At the annual meeting of the Women's Medical Society of the State of New York, held at the Hotel Pennsylvania on April 29th and 30th, the following officers were elected: president, Dr. Helen Walker, Buffalo, succeeding Dr. Theresa Scanlan, New York; first vice-president, Dr. Adelaide Romaine, New York; second vice-president, Dr. Sophy Page Carlucci, Endicott, N.Y.; third vice-president, Dr. Ruth Ewing, New York; treasurer, Dr. Julia Lichtenstein, New York; and secretary, Dr. Jennie D. Klein, Buffalo. At the luncheon session Dr. Scanlan presented a testimonial scroll to Dr. Emily Dunning Barringer for her work in obtaining the commissioning of women doctors in the armed forces during the war.

United Medical Service.—The enrollment of 37,029 persons in United Medical Service, Inc., during the first three months of 1946 brings the overall total to 198,157, according to the April report of the Service. The gain represents an increase of nearly one hundred percent over the first quarterly enrollment of 1945. During the first quarter of 1946, 3,029 bills amounting to $120,132 were paid on behalf of subscribers as against 1,152 bills amounting to $63,956.50 during the first three months of 1945. Of the total number of contracts in force at the end of March 1946, 173,448 covered surgical indemnity, 2,697, surgical service, and 14,465 surgical and medical care in the hospital. A total of 5,988 covered general medical care in the home and doctor's office as well as in the hospital. Contracts previously issued by United Medical Service predecessor organizations totaled 1,559. More than ten thousand physicians agreed to participate in the Service.

Clinical Society of Reconstruction Hospital.—At a meeting held on Wednesday evening, April 17th, cases of herniated nucleus pulposus were presented by Dr. Carl A. Peterson. Dr. Walter D. Ludlum, Jr. presented two cases of myeloma; one, plasma cell and the other reticulum cell, with postoperative results. Dr. Henry H. Ritter presented a case of thickened ligamentum flavum which involved the nerve root, with postoperative results after laminectomy; a case of compression fracture of the first lumbar vertebra, showing the result of spine graft, and a case demonstrating the spine graft for unstable low back.

Dr. Rathbun Honored.—In a tribute to his forty-eight years in medicine and his contributions in the field of urology, Dr. Nathaniel Phillips Rathbun was presented with the Alumni Medallion for distinguished service to American medicine at the forty-eighth commencement exercises of the Long Island College of Medicine held at the Brooklyn Academy of Music, Thursday evening, March 28th. Dr. Rathbun has distinguished himself as a leader in urology for the past thirty years as chief of the Urologic Service of Brooklyn Hospital and as consultant urologist at Lutheran, Norwegian, Beth-El, Bushwick, and Eastern Long Island Hospitals. He has constributed many papers and articles on urological subjects to medical journals throughon the country. In making the presentation of the medallion, Dr. Frank L. Babbott, chairman of the Board of Trustees, cited Dr. Rathbun's years of service in the practice of medicine.

Swiss Scientists Visit America.—Dr. Leopold Ruzicka, winner of the 1939 Nobel Prize in Chemistry, and Dr. Tadeus Reichstein, a pioneer in the synthesis of vitamin C, are in the United States studying American scientific developments. They came on the invitation of the American-Swiss Foundation for Scientific Exchange, an organization founded to strengthen the scientific bonds of the two countries by fostering visits of scientists of one country to the other. The American Cancer Society also participated in the invitation, because of the extensive knowledge of steroids possessed by these scientists. Among the research institutes which they visited was the Hoffman-La Roche research laboratory, Hoffman-La Roche, Inc., Nutley, N.J., and they lectured before many scientific groups during their stay in the United States.

New Post Established at Yale.—The creation at Yale University of a new post—a director of medical affairs—has been announced. Dr. George Bapst Darling, executive secretary of the National Academy-Research Council, has been appointed to this office. Dr. Darling, who will have assumed his new post by July 1st, will correlate the University interests represented in the Schools of Nursing and Medicine, the Department of Public Health, and the Grace-New Haven Community Hospital. In making the announcement, President Seymour stated that in the creation of this post "a long-felt need is being met, uniting under one central administrative officer all the departments and the schools of the University which deal with medicine, health, nursing, and education involving these subjects". He believes that "from this correlation will come a greater efficiency in administration and a more equitable distribution of planning in the many approaches to health, including service, education, and research encompassed in the large Yale interests".

Colonel Gotaas Decorated.—The United States Army has conferred the decoration of the Legion of Merit upon Colonel Harold B. Gotaas, acting director of the Office of Inter-American Affairs and president of the Institute of Inter-American Affairs, in recognition of "cooperative health and sanitation work carried on between the United States and eighteen of the other American Republics". The citation lauded Colonel Gotass for "exceptional meritorious conduct in the performance of outstanding services" in conducting the health and sanitation work of the Institute.

American Doctor Honored by Bolivian Government.—The Bolivian Minister of Labor, Health, and Social Security, Dr. German Monroy Block, has announced that the new modern hospital in the jungle city of Guayamerin will be named for Major Curtis E. Richey of Des Moines, Iowa, "as a tribute to the work he performed in our tropical region as a member of the Institute of Inter-American Affairs and of the Bolivian Servicio Cooperativo Inter-Americano de Salud Publica." Dr. Monroy suggested that a bronze plaque honoring Dr. Richey also be placed on the wall of the structure.

Sturtevant Memorial Clinic.—Thirty-five friends and associates of the late Dr. Mills Sturtevant, who founded the gastroenterology clinic of New York University College of Medicine in 1926, have decided to raise $100,000 to build, equip and endow a new stomach clinic in his memory. Their campaign will start immediately. The new clinic will be part of the New York University-Bellevue Medical Center in the Bellevue area. Dr. Arthur M. Wright, former chairman of the College of Medicine Department of Surgery and chief of the Third Surgical Division of Bellevue Hospital, has been appointed general chairman of the campaign, with Dr. Max P. Cowett, an associate of Dr. Sturtevant at the time the clinic was established, as vice-chairman. Dr. Sturtevant was on the New York University medical staff from 1913 until his death in 1945, and was chief of the gastroenterology clinic until 1938.

Franklin Medal Award.—Dr. Henry Clapp Sherman, Mitchill Professor of Chemistry at Columbia University, and Sir Henry Thomas Tizard, president of Magdalen College, Oxford University, have been selected as the 1946 recipients of the Franklin Medal, according to an announcement by Dr. Henry Butler Allen, secretary and director of The Franklin Institute, Philadelphia. Presentation of the medals was made on April 17th, at the annual Medal Day ceremonies of the Institute. Founded in 1914, the Franklin Medal, highest honor of the Institute, is awarded annually to "those workers in physical science or technology, without regard to country, whose efforts have done most to advance a knowledge of physical science or its applications". The face of the medal carries a medallion of Benjamin Franklin done from the Thomas Sully portrait owned by The Franklin Institute.

Dr. Sherman received the Franklin Medal "in consideration of his many contributions to the science of nutrition and especially of his many public services, as a result of which the general health level of millions of human being all over the world has been uplifted". Sir Thomas Tizard received the medal in recognition of his outstanding contributions to the science of areonautics.

Clinical Research Forum.—The New York Academy of Medicine will hold a meeting on Wednesday evening, June 5, 1946, to provide a forum in which research workers of New York City and vicinity may present results of original research in clinical medicine. This meeting has been arranged by the Committee on Medical Education of the Academy.

Dr. Heymans Honored.—Dr. Corneile Heymans, professor of pharmacology at the University of Ghent, Belgium, and medical director of Belgian Relief, was the guest of honor at a dinner given on April 18th at the Commodore Hotel, New York, by Dr. Maurice L. Tainter, of Rensselaer, N.Y., research director of Winthrop Chemical Company, Inc. Dr. Heymans, a distinguished pharmacologist, received the Nobel Prize in 1938 for his work in circulation and respiration. Among the guests were: Dr. Otto Loewi, Nobel Laureate in 1936 for his work on transmission of nerve, impulses, and research professor of pharmacology at New York University Medical School; Dr. E. P. Pick, clinical professor of pharmacology at Columbia University Medical School; Dr. Harry Gold, professor of therapeutics, Cornell University Medical School; Dr. E. H. Loughlin, Long Island College of Medicine, and Dr. George Wallace, professor emeritus of pharmacology, New York University School of Medicine. Attending from Winthrop Chemical Company were Dr. Frank J. Stockman and Dr. Justus B. Rice, vice-presidents, and Dr. C. M. Suter, director of chemical research.

Mississippi Valley Medical Society.—The eleventh annual meeting of the Mississippi Valley Medical Society will be held Sept. 25, 26 and 27, 1946, at the Hotel Jefferson, St. Louis, Mo. As no meeting was held in 1945 all the officers of the society have been retained for another year. These include: president, Dr. Grayson L. Carroll, St. Louis; president-elect, Dr. Walter A. Sternberg, Mt. Pleasant, Ia.; first vice-president, Dr. Louis H. Jorstad, St. Louis; second vice-president, Dr. Elmer E. Nystrom, Peoria, Ill.; third vice-president, Dr. E. J. Lessenger, New London, Ia.; secretary-treasurer, Dr. Harold Swanberg, Quincy, Ill. The society is continuing its compaign for life memberships, and all fees are placed in the society's endowment fund. Well over one hundred members have become life members and over $3,000 has been placed in the endowment fund, all invested in U. S. war bonds.

Symposium on Malaria.—Wartime progress toward the conquest of malaria was reviewed at a three-day symposium on antimalarial agents, held during the 109th national meeting of the American Chemical Society which opened in Atlantic City, N. J., on April 8th. Thirty-seven papers by authorities in the antimalarial field were presented at the symposium, which was held by the society's division of medicinal chemistry, with Professor E. F. Degering, of Purdue University, Lafayette, Ind., presiding as division chairman. The program included a general report on the antimalarial research program, by Professor Carl Shipp Marvel of the University of Illinois at Urbana; a discussion of the present status of antimalarial research in Germany, by E. C. Kleiderer of Eli Lilly & Co., Indianapolis, Ind., and an address by Dr. James A. Shannon, of New York University, on "The Evaluation of Antimalarial Agents in Man."

Officers of the International Spanish Speaking Association of Physicians.—The following officers were elected recently to serve for the year 1946: president, Dr. J. M. Gershberg; first vice-president, Dr. Lyman Wilbur; second vice-president, Dr. Juan Sacasa; third vice-president, Dr. R. P. Goodall; fourth vice-president, Dr. S. P. Goodhart; executive secretary, Dr. Milton Platz; secretary, Dr. William B. McDonough; assistant secretary, Dr. J. Landesberg; treasurer, Dr. Frederic Aron; recording secretary, Dr. Harry Cohen; corresponding secretary, Dr. Ernest Dupre; receptionists, Dr. Garcia Lascot and Dr. R. C. Morrow, Jr.; legal advisor, Judge M. Strasburger. Chairmen: board of directors, Dr. G. W. Henry; advisory council, Dr. George Draper; executive committee, Dr. Edgar Mayer; scientific committee, Dr. Angel Roffo; foreign committee, Dr. Gottwald Schwartz; Latin American relations, Dr. Alberto Izquerdo; medical committee, Dr. J. H. Heacock; dental committee, Dr. Fred Allen; pharmaceutical committee, Dr. C. R. Bollard; and lecture committee, Dr. J. M. Gershberg.

Joint Meeting of Doctors and Pharmaceutical Manufacturers.—The Canadian Medical Association will meet in joint session with the American Pharmaceutical Manufacturers' Association on the evening of June 10th, at the Banff Springs Hotel, Canada, where the Canadian Medical Association is convening concurrently with the American Pharmaceutical Manufacturers' Association's convention at nearby Lake Louise. It is believed this marks the first formal joint session anywhere of associations representing the pharmaceutical manufacturers and the medical profession they serve. The meeting will be informal. After short welcoming speeches by the Canadian Medical Association and responses by the American Pharmaceutical Manufacturers' Association, the doctors will play host to the drug makers on a tour of the medical exhibits and the evening will be concluded with refreshments. The Canadian Pharmaceutical Manufacturers' Association will also meet jointly with the American Pharmaceutical Manufacturers' Association, collaborating in the sessions which will be held at Lake Louise from June 10th to 12th.

Medical Institute of Moscow.—A dinner was held by the Greater New York Committee for Russian Relief in New York on April 30th, as a major function in the current campaign to reequip the First Central Medical Institute of Moscow, the foremost medical center in the Soviet Union. Dr. George Baehr, president of the New York Academy of Medicine, presided, and the speakers included Dr. Anton J. Carlson, professor of physiology at the University of Chicago, and Dr. William M. Stanley of the Rockefeller Institute of Medical Research at Princeton, N.J. The Institute, at present, plays a dual rôle in Soviet medical advance. War victims from all parts of the Soviet Union are treated in the Institute's network of buildings, which includes a children's hospital. Bed capacity of the Institute is 3500. Additionally, the Institute is a gigantic medical school with faculties in therapeutic-preventive medicine and sanitary-hygienic medicine. It has an enrollment of five thousand students in fifty departments, although three out of every five qualified applicants cannot attend because of the limited facilities. Half of the students are women. Graduates serve in areas of greatest need throughout the U.S.S.R.

Personal.—Colonel Harold W. Jones, M.C., U.S. Army, was recently appointed consultant medical editor for The Blakiston Company, Philadelphia, Pa.

Colonel Francis R. Dieuaide, formerly chief of the Tropical Disease Treatment Branch of the Surgeon General's Office, has been named scientific director of the Life Insurance Medical Research Fund.

Dr. Solomon Sherry, M.C., recently discharged from the Ninth Army Air Force, received a special award from the United States Typhus Commission at the graduation exercises held recently at New York University.

Dr. Dwight O'Hara, Waltham, professor of preventive medicine at Tufts College Medical School, Boston, has been elected dean of the school. He was acting dean during the past four years while Dr. Albert W. Stearns was on leave for military service.

Dr. Bernard S. Oppenheimer of New York, was elected president of The Association of the Alumni, Columbia University College of Physicians and Surgeons at the recent annual meeting, succeeding Dr. John J. H. Keating.

Mr. Philip R. Mather, of Boston, was recently elected president of the National Health Council.

Dr. William H. Taliaferro, chairman of the department of bacteriology and parasitology at the University of Chicago, received the honorary degree of doctor of science at the sesquicentennial celebration of the University of North Carolina on April 13th.

Dr. Max H. Fisch, formerly curator of the rare book collection of the Army Medical Library, has been appointed chief of the history of medicine division.

Colonel James E. Ash, director of the Army Institute of Pathology, Washington, D.C., has been awarded the Legion of Merit, the citation stating that Colonel Ash had "organized the most extensive tissue pathology service ever known to the world".

Dr. Jackson W. Foster has resigned as head of the Microbiological Research and Development Department of Merck and Company, Inc., to accept an appointment as associate professor of bacteriology at the University of Texas, Austin, according to *Science*.

Dr. Oscar Riddle, now visiting professor in various South American countries under the auspices of the Department of State, has been elected to honorary membership in the Sociedad de Biologia de Montevideo and to corresponding membership in the Sociedade Brasileira de Patologia Clinica, according to *Science*.

Dr. Edward F. Roberts, until recently Major Roberts, M.C., executive officer and director of technical training, Fourth Service Command Medical Laboratory, Fort McPherson, Ga., has joined the staff of Wyeth Incorporated, Philadelphia, as director of clinical investigation. Dr. Roberts is a graduate of Yale University, receiving a Ph.D. degree in immunology in 1926, and his M.D. degree in 1930. Dr. Roberts becomes a member of the Medical Council of Wyeth Incorporated of which Dr. Paul Gyorgy is chairman and Ambrose Hunsberger, Jr., executive secretary.

Ray E. Brown, assistant superintendent of the University of Chicago Clinics, has been appointed superintendent, to succeed Dr. G. Otis Whitecotton, who resigned to become medical director of the Alameda County Institutions and superintendent of Highland-Alameda County Hospital of Oakland, Calif.

Letter From London

A British Letter in these days of stress and strain is not easly to compose and one dealing with medical matters falls into a similar category. It is a trite remark to make that peace has not brought that sense of security and satisfaction which it was hoped it would bring, especially in Europe and Asia. However, after a war of the magnitude and horrors of that just ended, one could not expect that what were normal habits and customs would come again. In Britain we are in a land where unprecedented changes are mapped out. Nationalization is in the air and appears to be coming into force in all fields and from which the medical profession is not to be exempt. But a dissertation on polities should have no place in a medical journal. The object should be to provide interesting news and happenings appertaining to medicine and surgery.

Conference on Food

A conference of United Nations Food Ministers with representatives of U.N.R.R.A. has been called for May 20th, to be held in Washington in order to discuss world food problems. This step has been taken at the instigation of Sir John Boyd Orr, the great authority on subjects relating to food. Sir John Orr, now sixty-five years old, twenty-five years ago was appointed director of the Rowett Research Institute situated near Aberdeen, Scotland, which he has so built up that from being a comparatively small concern, it is now perhaps the largest of its kind in the world and has gained international fame for itself and its maker. Sir John Orr attended the World Food Conference at Hot Springs in 1943 and in October last was elected director general of the Food and Agricultural Organization set up to insure as far as possible freedom from want in the post-war world. Sir John is a vigorous brainy Britisher who knows what is wanted and how to get things done. This directorship could not have been placed in more experienced or capable hands.

Chair of Anatomy at Aberdeen University

Mr. G. A. Mitchell, senior lecturer on anatomy at the University of Aberdeen, has been appointed to the chair of anatomy, in succession to that outstanding anatomist, Dr. F. Wood Jones, F.R.S. Mr. Mitchell had a distinguished career as a medical student at Aberdeen University and served in the war overseas during five years was mentioned in dispatches and awarded the Order of the British Empire.

Fellowships of Royal College of Surgeons, Edinburgh

Among the recipients of the fellowships of the Edinburgh Royal College of Surgeons, March 14th, was Major General P. R. Hawley, late chief surgeon to the American Forces in Europe. At this same assembly, the first to be held since before the war, a period of seven years, a unique distinction was conferred. Miss Horsbrugh was the first woman to be made an honorary fellow since this corporation was instituted four hundred and ten years ago.

Eye Diseases and Affections

In the *British Medical Journal,* February 9th, Mr. Joseph Minton writes on occupational eye diseases, pointing out that the search for occupational "cases" is all important and that whenever a case of eye disease is being investigated, not only should search for a "septic focus" be made but the working conditions of those infected should be looked into. He also insists that a department of industrial ophthalmology is essential. The Royal Eye Hospital in London has decided to establish such a department. In connection with this subject it may be pointed out that Paracelsus (1498-1541) was the first to call attention to some occupational affections including a few of the eyes. Bernandino Ramazzini (1633-1714) went into the matter more exhaustively, indeed opened up a new department of medicine, to wit, the diseases and hygiene of occupations. Of course, the scope for such investigations was greatly more restricted in the times of Paracelsus and Ramazzini that at the present. The conditions which Paracelsus and Ramazzini noted were stone-masons and miners phthisis, the vertigo and sciatica of potters and the eye troubles of gilders, printers and some other occupations.

Professor Arnold Sorsby on Blindness in the British Commonwealth

Professor Arnold Sorsby made a survey of blindness in the British Commonwealth published in the *British Medical Journal,* October 27, 1945, in reference to the causes of blindness in the African colonies, he had this to say: "Trachoma is probably rare but not unknown as was believed previously. With regard to Uganda, however, trachoma is indemic and is the chief cause of visual disability among the Africans.

Atomic Energy

In the British House of Commons on February 6th, Mr. Atlee stated that little progress has been made as yet in the development of atomic energy for peace-time purposes. He hoped that the cooperation which existed between Britain and the United States during the war would be continued.

South African Medical Congress

For the first time since 1919, the Medical Association of South Africa and the Medical Congress will hold what used to be its annual meeting and now will be so again, at Durban from October 7th to 12th this year.

Meeting of the Ophthalmological Society in the United Kingdom

The above Society will hold its annual congress on May 30, 31, and June 1st, at the House of the Royal Society of Medicine, 1 Wimpole Street, London. The subject for discussion will be ocular disturbances associated with malnutrition.

American Ambulance in Britain

The American ambulance in Britain which during the war gave very valuable service has given $125,000 to the Middlesex Hospital, London. With this money it is intended to endow two single bed wards to which citizens of the United States will have the first claim. The American Ambulance Unit has also presented to Guy's Hospital $25,000 to endow four beds and two cots and similar sums to St. George's and Westminster Hospitals for the same purpose. When the Hunterian Museum in Lincoln Inn Fields was almost destroyed and

the House of the Royal College of Surgeons nearby damaged badly by enemy action, the American Ambulance came to their aid with seventy-five ambulances and removed numerous specimens to different parts of the country. For this, the thanks of the nation were given.

Appointments

Sir Francis Fraser, professor of medicine, London University, has been made director of the British Postgraduate Medical Federation now being set up to coordinate and develop facilities for postgraduate medical education and training in London.

Dr. Alexander Haaow has been appointed to the London University Chair of Experimental Pathology in Cancer at the Royal Cancer Free Hospital in London.

Dr. C. Langton Hewer will be the editor and Dr. R. Blair Gould sub-editor, of a new quarterly journal, *Anesthesia,* soon to be published by the Association of Anesthetists of Britain and Ireland.

Notable Names in Medicine and Surgery

A small book with the above title by Mr. Hamilton Bailey, F.R.C.S., and Mr. W. J. Bishop, sub-librarian of the Royal Society of Medicine, was published in 1944. These biographies were not always of those whose discoveries had been epoch making, but as the subtitle says, "short biographies of some of those whose discoveries (not necessarily the greatest medical discoveries) have become eponymous in the medical and allied professions. The selection of those written about is interesting, and the book is well worth reading. It is published by H. K. Lewis and Co., Gower Street, London.

Aid for the Blind

In Britain there is an organization with the apt name "The Servers of the Blind League", which has done great work for the blind. After the war 1914-18, began with social clubs for the blind in various parts of the country, together with a Braille correspondence circle. The Ellen Terry National Homes for the Blind Defective Children at Reigate near London, a home for the aged blind at Woking also near London and the Robert Spurrier Home at Ascot within easy distance of London. The organization is appealing for money in order to build a nursing home to be opened this year, containing wards for bedridden blind patients and a special wing for private patients; also a new home for the aged blind. For the latter, the League has in view a house in Sussex which is large enough to provide single and double bed sitting rooms as it is felt that "a room of one's own" is the desire of all old people, even the blind. This new home will cater also for blind persons with limited incomes. Donations may be sent to the organizing secretary, Servers of the Blind League, 28 Manchester Street, London, W.1., England.

Autosuggestion

A doctor at a recent meeting of the Hunterian Society told the following tale. A patient woke up in the night feeling suffocated. He got out of bed and tried to open the window, failing to do so, such was his desperate need for air, he smashed it, breathed in through the aperture thus being revived and went back to bed. In the morning he discovered that it was not the window he had broken—it was the looking glass.

Library of the Royal College of Surgeons

The main library of the Royal College of Surgeons, Lincoln Inn Fields, London was not damaged seriously when other parts of the building were bombed, and the books have now been returned. Rearrangement of the library is now going on and the reading room is open once more to students from all parts of the world.

History of Medicine in Art

An exhibition of the history of medicine in art was held at New York University College of Medicine, 477 First Avenue, New York. The prints were from a collection of more than one thousand owned by Dr. Clements C. Fry of the Department of Health, Yale University, who has been collecting medical prints since 1927. Many of his earliest examples were acquired from the collection of Dr. Eugen Hollander, who wrote extensively on the history of medical caricature. The exhibition included prints displayed recently at the National Gallery of Art, Washington, and others selected by Dr. Fry from his collection especially for New York University's showing.

Several early fifteenth century woodcuts representing cures by faith and works of Lucas van Leyden, Pierre van der Borcht, van Ostade and Rembrandt in the sixteenth and seventeenth centuries were shown. Emphasis falls on the eighteenth century, when charlatans and quacks were popular targets for satire. Examples include caricatures by Rowlandson and Woodward and an unusual colored aquatint by L'Eveille. Prints by Daumier, Boilly and Cruikshank were among those on medical subjects in nineteenth century art, and among the examples of contemporary art were two drawings by Darrow and Petty satirizing interest in psychoanalysis. The exhibit was opened on April 15th and closed on the 27th.

Health Campaign in Ecuador

A modern center of preventive medicine is now in operation in Quito, the latest of more than a score of new or remodelled health institutions to enter the battle against disease in Ecuador during the past four years. All of these health centers and hospitals have been built or enlarged under the direction of the Servicio Cooperativo Inter-Americano de Salud Publica, a joint organization made up of Ecuadorean health officials and nine American health technicians of the Institute of Inter-American Affairs medical mission, headed by Major Wyman R. Stone.

The new Quito health center contains facilities for prenatal and infant hygiene clinics, a tuberculosis clinic, a venereal disease clinic, and general out-patient services for the neighboring San Juan de Dios Hospital. It also houses the Ecuadorean National Health Service's administrative and statistical offices, and its diagnostic laboratory. Other institutions set up or modernized in this improvement program are sixteen general hospitals, two children's hospitals, three maternity hospitals, two communicable disease hospitals, one insane hospital, one tuberculosis hospital, the Municipal Health Laboratory of Quito, the Ecuadorean Institute of Hygiene, two health centers, a medical school building, and a school for nurses. The activities of the cooperative health service included a campaign against malaria and a drive for better sanitation.

Book Reviews

Books on Penicillin

Penicillin and Other Antibiotic Agents. By Wallace E. Herrell, M.D., F.A.C.P., assistant professor of medicine, the Mayo Foundation, University of Minnesota; consultant in medicine, Mayo Clinic, Rochester, Minn. With forty-five illustrations. Philadelphia and London: W. B. Saunders Co., 1945. Pp. 348. Price $5.00.

Professor Wallace Herrell of the Mayo Clinic has written a sound, comprehensive book on penicillin. This is one of the best books that we have encountered on penicillin. Many books have been written hastily and contained a great many errors. Professor Herrell's work is sound, complete and objective. It was at the Mayo Clinic that the first fairly large-scale clinical work was done with penicillin, and it is rather fitting that one of the Mayo group should present this present volume to the medical profession. The historical aspects are fairly well known to the medical profession, but Professor Herrell gives a brief outline of those who were responsible for the discovery and perfection of penicillin. He tells how the penicillin is produced, what its physical and chemical properties are. He cites the activities of penicillin in vitro, what it does to the bacteria, the activities of penicillin in vivo, its absorption and excretion, various standardized techniques. Mainly, the book deals with the clinical use and its effectiveness in various diseases.

It also takes up some of the other antibiotic agents such as tyrothricin, streptomycin and quite a group of the minor ones which have not yet found clinical acceptance. We can heartily recommend this book.

* * *

Penicillin Therapy. Including Tyrothricin and Other Antibiotic Therapy. By John A. Kolmer, M.S., M.D., Dr. P.H., Sc.D., F.A.C.P., professor of medicine in the School of Medicine and the School of Dentistry, Temple University, Philadelphia. With illustrations. New York and London: D. Appleton-Century Company, Inc., 1945. Pp. 302. Price $5.00.

Another book which has recently been issued on penicillin is written by Dr. John A. Kolmer. This book is readable, but in parts somewhat sketchy. It covers the field of penicillin from production through clinical uses. The other antibiotics, aside from penicillin, receive brief mention. For those who are interested in a simple presentation, with emphasis on the practical use and application of penicillin, this book will be found of real value for the physician or nurse.

X Rays in Cardiology

Clinical Roentgenology of the Heart. By John B. Schwedel, M.D., associate attending physician, medical division, and adjunct attending physician, department of roentgenology, Montefiore Hospital, New York. With 749 illustrations. New York: Paul B. Hoeber, Inc., 1946. Pp. 380. Price $12.00.

This is Volume 18 of *Annals of Roentgenology.* The use of x rays in cardiology has been of inestimable value in determining the presence or absence of enlargement of the heart, the matter of axis deviation, and the diagnosis of thoracic aortic aneurysm. But the roentgenologist does not always have at hand the clinical history, past or present, which might be of service in forming his conclusions. This volume is based on some thirty thousand fluoroscopic and roentgenographic examinations, including many hearts regarded as normal. Such studies may confirm a clinical impression or may correct a false one. For example, x ray will help determine the relative size of the heart chambers in mitral stenosis.

Eleven years' experience with fluoroscopy, combined with some four thousand autopsies, yielded the valuable information found in this book. The plan of the contents is to consider methods of examination, cardiac measurements, normal cardiac contours, normal variations in the heart. Four individual chapters consider each chamber separately. The aorta and its varying contours is described in thirty pages of text and figures, then the venæ cavæ and brachiocephalic vessels are outlined. The lungs in heart disease occupy chapter 12. The pericardium and its diseases is set down in sixteen pages (chapter 13). Congenital heart disease, anomalies of prenatal growth and development, are well recorded. Chapter 15 describes cardiac displacement in such conditions as spinal curvature and mechanical irregularities of the chest wall, and the final chapter 16 takes up various phases of calcification. The bibliography is complete and exhaustive. In fact, this book seems to contain all that is known concerning the gross morphology of the heart, from which much can be deduced as to its behavior.

Medical Department's Contributions to Victory

Men Without Guns. By DeWitt Mackenzie, War Analyst of the Associated Press. Foreword by Major General Norman T. Kirk, Surgeon General of the U.S. Army. With 137 illustrations from the Abbott Collection owned by the U.S. Government. Philadelphia and Toronto: The Blakiston Co., 1945. Pp. 100. Price $5.00.

Mr. Mackenzie who was a war correspondent in World War I, and an "analyst" of the happenings in World War II, devotes some forty-seven pages to telling the story of "the medics", and that includes not only doctors, but nurses, Red Cross workers, enlisted men, officers and pretty much everybody who had anything to do with "casualties". Dr. Kirk in his understanding and sympathetic foreword states that ". . . one of the greatest contributions to victory has been made by doctors, nurses and enlisted men of the Army Medical Department." Quite so. The story needed telling both in prose and pictures, and here we have it, conceived as it was by Lt. Col. Howard F. Baer, M.A.C. The Abbott Laboratories sponsored it and must have spent a vast sum in producing it. The War Department encouraged it, and the Association of American Artists (the individual artists have inscribed their names on each picture) supervised the "layout". The frontispiece is a colored photograph of the Surgeon General and his staff, each face quite recognizable, and identifiable by the names "from left to right." The first chapter of the text is devoted to the corpsmen whose status was so precarious, especially in the Pacific area, that they had to smear out the insignia on helmet, uniform and ambulance, or be killed by snipers. A hospital was a natural target for Jap fliers, and to kill a wounded "enemy" was the chief sport in a day's work. But the inhumanity of the little yellow men was greatly overbalanced by the sublime humanity of the white man who served his own kind and "the enemy" wherever suffering was encountered. One of the most dastardly acts of the Japanese was the bombing from the air of the hospital ship *Comfort,* killing some twenty-nine people, including five Army Medical officers and six Army nurses.

Here is an indispensable record which ought to be at the elbow of every doctor who had the privilege of serving his country in uniform. It will have a place also in the sancta sanctorum of that great group of medical men who were "too old" to help our fine, wounded boys, and did not have the opportunity. This book was greatly conceived and has been greatly brought to fruition.

Biochemistry

Human Biochemistry. By ISRAEL S. KLEINER, Ph.D., professor of biochemistry and physiology, New York Medical College, Flower and Fifth Avenue Hospitals, and formerly an associate of the Rockefeller Institute for Medical Research. With seventy text illustrations, including five color plates. St. Louis: The C. V. Mosby Co., 1945. Pp. 573. Price $6.00.

This new biochemical approach to medicine covers the subject with some success by evading experimental data. An attempt is made to present the subject as an integral unit of study rather than as part of the medical curriculum. But in revealing the human body as an applied biochemical mechanism the author, without clinical background or experience, falls back on stereotyped methods of interpreting chemical phenomena. The number of clinical correlations is so limited that much chemical knowledge is lost in the attempt to bridge the gap between the chemical and clinical aspects of medicine. The attempt to present biochemistry in the light of recent clinical application at the end of the book is less comforting because it contains a series of hetrogeneous advances isolated from the body of the text. Nevertheless each chapter devoted to the classic phases of biochemistry is presented clearly and authoritatively for the elementary student of biochemistry and the spirit of chemical application to the everyday problems of clinical medicine will greatly benefit medical student.

The Rorschach Test

Rorschach's Test. A Variety of Personality Pictures. By SAMUEL J. BECK, Ph.D., head of the psychology laboratory, department of neuropsychiatry, Michael Reese Hospital, Chicago. With a foreword by LT. COL. ROY R. GRINKER, M.C. New York: Grune & Stratton, 1945. Pp. 402. Price $5.00.

Much has been accomplished with the tool that Herman Rorschach devised and had hardly begun to utilize before his untimely end. From its origination as a diagnostic adjunct to clinical psychiatry his test has been evolved into a psychological technique of great importance for the study of the normal and intact whole personality in its developmental shifting of activities to higher functional levels, and for the study of devolutionary processes accompanying disintegration of the personality. As such, the Rorschach method is a research tool more dynamically oriented in its capacity to uncover levels of activity and interactivity of parts of the personality than almost any other brief method yet available. Even now its limits have not been reached.

What has been accomplished up to the present has not been the result of wider use of the test by men qualified only by short courses of instruction, not of the anticipated accumulation of "normal standards", and not of artificial mutilation of the method for the purpose of quickly obtaining "good" or "bad" responses. Progress has resulted only from the increased depth of vision and broadening perspective of a few investigators capable of such growth, who have the humility to study their material carefully and repetitively, to use every assistance from clinical psychiatry, psychoanalysis, and sociology and to publish their results after considerable and cautious reflection.

These words have really described the author of this book, whose development this reviewer has watched as he has worked closely with the members of the Department of Neuropsychiatry of the Michael Reese Hospital. The reader of this volume will not be instructed as to the results of a "test" for various clinical conditions, but he will have the opportunity to visualize through a master's eyes the dynamic forces operating in normal living beings of varying levels of accomplishment, and he will see clearly in the pathological material how these same dynamic forces are in disharmony. These glimpses should intensely inspire the student of the Rorschach method to accelerate his own development so that he too may contribute toward much needed progress in clinical psychology.

The Motor-Skeletal System

Surgical Treatment of the Motor-Skeletal System. FREDERIC W. BANCROFT, A.B., M.D., associate clinical professor of surgery, Columbia University, supervising editor, and CLAY RAY MURRAY, M.D., F.A.C.S., professor of orthopedic surgery, associate editor. With 1,063 illustrations and one color plate. In two volumes. Volume I: Deformities, Paralytic Disorders, Muscles, Tendons, Bursæ, New Growths, Bones, Joints, Amputations. Volume II: Fractures, Dislocations, Sprains, Muscle and Tendon Injuries, Birth Injuries, Military Surgery. Philadelphia, London and Montreal: J. B. Lippincott Co., 1945. Pp. 1866, xxix. Price $20.00 a set.

Including the two authors immediately responsible for the set-up of this massive compilation there are forty-five contributors in all. The supervising editor, Dr. Bancroft, says in his editorial note that, after going over all of the available books dealing with surgical treatment, he found none which fills a "certain need". This need seems to be to avoid describing obsolete or obsolescent operations, and to establish a pattern of treatment or "surgical coverage" which can present up-to-date, authoritative material in the most concise, usable form. No attempt is made to present problems in etiology or diagnosis, but the subeditors have been given rein to handle their own material in their own commonsense way.

As for the orthopedic section, Dr. Murray aims to include all conditions which involve the skeleton and the structures directly concerned with its support and motorization; therefore, trauma, disease, tumor and deformity are studied as fully as possible, and lesions of the trunk not directly involving the function of the motor-skeletal system have been left out. What, when and how to do the more commonly performed operations is the aim of this division.

Naturally, there has been some duplication of descriptive operative procedures but these do not vitiate the overlook as a whole. Cross references and editorial interpolations are to be found when they have seemed necessary. Illustrations have been selected, not for show, but to clarify the text. Several of the contributors were in war service when writing their "copy", and the proof-reading, etc., had to be done by others. The Surgeon General of the Army cooperated to the full in helping to bring military surgery up to the minute insofar as that was humanly possible. Volume one of this authorship can be highly recommended to workers in the field it covers.

Section seven in the second volume is devoted to a

general discussion of fractures and dislocations and "other trauma" by the associate editor, Dr. Murray. Emergency and first aid care which are of such major importance are described, followed by reduction and immobilization with the various methods of maintaining fixation and securing union. Infections are recognized as pernicious influences against good healing; therefore, we find a discussion of gas bacillus invasions, chemotherapy, and other methods of fighting the germ invaders. Compound fractures are discussed in a separate four and one-half page sketch by Dr. William Darrach. An excellent article on fractures of the mandible is supplied by a dental surgeon, Francis S. McCaffrey, who is associate professor in the Columbia School of Dentistry. Dr. McCaffrey's text and graphic illustrations prove once more that, all in all, the oral surgeon is better equipped to handle such fractures than the general surgeon who sees only an occasional case, and is not accustomed to work in the mouth.

Femoral-neck fractures are always of interest, particularly in the aged. There is still a difference of opinion as to the merits of open operation, reduction and nailing, or closed reduction and nailing. To the casual and inexpert it would seem that complete visual knowledge of the situation would be preferable, but there are instances of refusal by the patient of the open procedure, or danger of infection looms where hospital facilities cannot be availed of. In any case, immobilization for some weeks is desirable according to most authors.

There is much that ought to be quoted from these two volumes. They will afford a ready reference for all who have a problem at hand for immediate solution.

Dynamic Psychiatry

Principles of Dynamic Psychiatry. Including an Integrative Approach to Abnormal and Clinical Psychology. By Jules H. Masserman, M.D., division of psychiatry, department of medicine, University of Chicago. With a glossary of psychiatric terms. Illustrated. Philadelphia and London: W. B. Saunders Co., 1946. Pp. 322. Price $4.00.

The phrase "dynamic psychiatry" is challenging to the uninitiated; therefore, we turn to the glossary and find that it has to do with "space-time interrelationships among phenomena . . . in psychoanalysis, mental mechanics." All of which sends us on still further to Einstein. However, the purposes of this book are: to introduce the reader to the principles of modern dynamic psychiatry, to outline the technic of making clinical diagnoses, and to demonstrate effective methods of therapy. Part I defines the scope of psychiatry and presents a critical examination of the various theories of behavior. Part II undertakes to rearrange these and integrate them into a biodynamic organon of behavior. Another volume which may be known as Part III is in preparation and will describe the various methods of influencing psychotic and neurotic behavior. Abnormal psychology is an enormous subject which involves much more than a working knowledge of "normal mind", and the further one delves into the inner recesses of the subject, the more doubtful he becomes of just what *normal* means. Deviations from what we consider standard for ourselves often surprise us. The common expression is: "I never thought I would or could do *that*." There are many instances in case histories and studies which are rather bewildering because they do not follow a preconceived pattern. John Watson, following in the footsteps of Hobbes, Berkeley and Hume, proposed a new "objective psychology" which included the conditioning reflexes of Pavlow. However, this Watsonian behaviorism failed, in the eyes of Dr. Masserman, to fulfill its original promises. The reasons for this are given on pages 89 and 90.

It is impossible in a brief review of this kind to give even an inkling of the rich philosophical discussions to be found in this book. For most nonspecialists it is "deep stuff" and not to be taken up merely for diversion. The psychoneuroses of World War II are being studied from new and entirely different angles than was the case in World War I, and the therapy is also quite different. One hopes that it is also more workable.

Progress in Pediatrics

The 1945 Year Book of Pediatrics. Edited by Isaac A. Abt, M.D., professor of pediatrics, Northwestern University Medical School. With the collaboration of Arthur F. Abt, M.D., associate professor of pediatrics, Northwestern University Medical School. Illustrated. Chicago: The Year Book Publishers, 1946. Pp. 448. Price $3.00.

The refresher value of this summary of pediatric progress is common knowledge amongst pediatricians. The abstracts contain terse diagnostic and therapeutic observations on all aspects of infancy and childhood with pertinent annotations by the editor. The clarity of each presentation is augmented by graphs, tables, roentgenograms and illustrations drawn from original contributions. Striking features of this issue are the manifestations of activity of rheumatic fever, effective treatment of urinary infections, differentiation of viruses from central nervous system infections, prevention of abscess formation, aluminum-precipitated pertussis vaccine, diagnosis of congenital cardiac lesions, clearance of worm infestation, misuse of penicillin, and dental problems in childhood.

The Surgical Patient

Hospital Care of the Surgical Patient. A Surgeon's Handbook, with an Appendix on the Treatment of Wounds. By George Crile, Jr., M.D., surgeon, Cleveland Clinic, and Franklin L. Shively, Jr., M.D., assistant surgeon, Cleveland Clinic. With a foreword by Evarts A. Graham, M.D., Bixby professor of surgery, Washington University School of Medicine, St. Louis. Second edition. Illustrated. Springfield, Ill.: Charles C. Thomas, 1946. Pp. 288. Price $3.50.

This unpretentious little pasteboard-covered handbook is packed full of the kind of "meat" this reviewer would have devoured had it existed that many years ago. It should become the intern's daily Bible, and it should be at the elbow of all who are taking "refresher courses" or otherwise preparing themselves for greater and more efficient service. Every year a new group of Fellows enters the Cleveland Clinic Hospital for advanced training, having had previous surgical experience of one year or more. They were often "at sea" in previous years because of varying technics before, during and after operations. Moreover, the condition is worsened by the amount of "paper work" all must do, and therefore they may unintentionally neglect diagnosis and treatment of postoperative complications.

The Crile Clinic is famous for its physiological approach to "problems", thanks to its great founder. Physiology and chemotherapy are the bases for blood transfusions, plasma administrations, and the use of parenteral fluids and oxygen. It is only fair to say that these are not as yet "standardized" throughout the

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MAY 1946

Medicolegal Notes

Authorizing Minor Operation Does Not Justify Major Operation

A physician or surgeon does not guarantee the results of a treatment or operation. Proof alone that an operation has turned out differently from what was expected, or even that it has been followed by disastrous instead of beneficial results, neither establishes nor supports an inference of want of proper care.

Neither the statement alleged to have been made by the defendant surgeon in a malpractice action, at the time he operated to remove a cyst from the plaintiff's eye: "Uh, uh, I have done the wrong thing," nor a statement that he "was in a hurry and late for a golf game," would, it was held, supply the absence of expert evidence establishing the want of proper care, skill and diligence.

But the question might remain whether the defendant did not breach the obligation which, as a surgeon, he owed the plaintiff when, after he saw the operation would not be the simple one he had assured the patient it would be, and which he secured her consent to perform, but a serious and difficult one, attended by possible danger, he went ahead without making full disclosure of the difficulties of the operation, and securing the patient's consent to go forward under the new found conditions. A surgeon may not perform an operation different in kind from that consented to or one involving risks and results not contemplated. (41 Am. Jus. Sec. 109). Judgment for the plaintiff was therefore reversed, but a directed verdict for the defendant was refused and the case was remanded for trial with right to the parties to amend their pleadings and offer new evidence. Wall vs. Brim, Fifth Circuit Court of Appeals, 138 F. 2d 478.

Prior cases have held that authorizing a minor operation ordinarily does not justify a major operation which involves risks or unexpected results.

On a second trial of Wall vs Brim, (138 F. 2d 478, 481), remanded because the evidence presented another issue, whether the operation was performed without the patient's consent, which had not been submitted to the jury, the Fifth Circuit Court held that the filing of an amendment to the pleadings by the plaintiff to conform to the evidence did not constitute the presentation of a new cause of action which was barred by limitations because not presented until more than two years after the cause of action had accrued under the Georgia Code. A new cause of action was not introduced by the plaintiff's amendment more than two years after it arose; therefore judgment for the plaintiff was affirmed. Wall vs. Brim, 145 F. 2d 492. Certioriari was denied by the United States Supreme Court in both cases. 65 S. C. Sec. 858.

Limitation of Compensation for Ankylosis

The Ohio Workmen's Compensation Act provides: "For ankylosis (total stiffness of) or contractures (due to scars or injuries) which makes any of the fingers, thumbs, or parts of either more than useless, the same number of weeks apply to such members or parts thereof as given above." Where there was no evidence to indicate that the fingers or thumbs or parts of either, or any of them, were "more than useless," it was held that the language of the statute was clear and unmistakable. "It is conceivable," the Ohio Court of Appeals said, Bohan vs. Industrial Commission, 64 N.E. 2d 838, "that any member of one's body should be so injured as to be more than useless because it might impair or handicap the exercise of other members or organs of the body, and if it were merely useless it would be nothing more than that." A claimant therefore under the act, would not be entitled to compensation for ankylosis in such circumstances. As stated in the court's original opinion in the case (63 N.E. 2d 925, 926), it was a matter for the Legislature and not for the Court.

Seriousness of Medical Treatment Not Mentioned in Application for Insurance

In an action to recover on a life policy, where the proof established that the insured had been treated by a doctor within two years prior to the date of the issuance of the policy, it was held to be the plaintiff's burden to come forward with proof to show that the condition occasioning such treatment was not of a serious nature or was not material to the risk. The plaintiff having failed to produce such proof, the New York Appellate Division held, Aquino vs. Metropolitan Life Ins. Co., 58 N.Y.S. 2d 721, that the complaint should have been dismissed and reversed judgment for the plaintiff.

Toward a Better World

FROZEN FOOD HOME DELIVERY. This new service, fast expanding, brings frozen foods to the door, like the morning milk. Compared with our former season-restricted diet, the year-'round variety and excellence thus made available mark a revolutionary advancement in better living.

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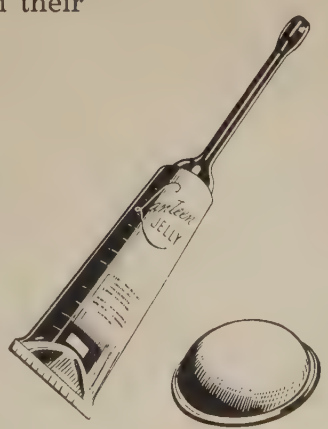

L A N T E E N

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Book Reviews

(*Continued from page 305*)

country. This book aims to do just that. In his foreword, Dr. Graham refers to the two A's, anesthesia and asepsis, as the foundation stones of modern surgery. However, even with these well carried out, the patient sometimes died from shock or "cause unknown" condition. Therefore, the functional behavior of all vital organs became of first importance to the surgeon. Shock is now almost nil as a cause of death following operations, largely as a result of Crile's great work. To safeguard the patient is the first and greatest of all surgical axioms. How to do this is fully and amply told in this splendid handbook.

Medical Economics

The Physician's Business. Practical and Economic Aspects of Medicine. By GEORGE D. WOLF, M.D., assistant clinical professor of otolaryngology, New York Medical College. With a foreword by Harold Rypins, M.D. With 58 illustrations. Second edition. Philadelphia. London and Montreal: J. B. Lippincott Co., 1945. Pp. 433. Price $6.00.

Dr. Wolf is a medical economist who, doubtless, practices what he professes. In his first edition the author rightly states that although scientific medicine has been "written up" pretty thoroughly in every detail of operating room and hospital procedure, the literature is scanty which deals with those practical, economic or juridicial matters which come up in everyday practice. In this second edition he avers that war and the peace which follows will greatly alter the relationship of the physician to his public and compel him to make "radical readjustments in the economic aspects of his practice." Industrial medicine, compulsory health insurance, and group practice are some of these determining factors, and it is good to know that "organized medicine" through county societies are well aware of these, and are trying to understand and make the necessary adjustments. Dr. Rypins in his "Foreword" speaks of the "long and wasteful years" spent by the professional novice in trying to orientate his work and his personality to "strictly professional contacts."

Dr. Wolf seems to have left nothing unsaid in his valuable book, from internship, to choosing a location, to the intricacies of Workmen's Compensation. He has taken an eagle's eye view of the doctor, his environment, his work, and his rewards, and the result is wholesome and beneficial to all concerned.

Psychosomatic Medicine

Psychology in General Practice. The Practitioner Handbooks. Edited by ALAN MONCRIEFF, M.D., F.R.C.P. London: Eyre and Spottiswoode, Ltd., 1945. Pp. 199. Price 12s. 6d.

This is the eleventh in the series of The Practitioner Handbooks written from the British viewpoint. It is recognized that many medical students may not have been instructed in the diagnosis and management of the "psychologically sick". The war has produced many such, especially in those cities where terror from the sky was present day and night. The mental and physical stress and strain under which everyone, combatants and noncombatants alike, is indescribable. In dealing with it, the examiner and counsellor must have more than a mere modicum of common sense. He must, himself, be stable, alert, resourceful, patient, and full of that kind of wisdom which can be gained only through experience. Such qualifications cannot be derived from books, but the testimony of many excellent witnesses together with case histories are extremely helpful. The phrase "psychosomatic medicine" is on the lips of everyone. In terms of therapy it means only that one should treat the patient and the disease will be taken care of automatically. This does not by any means do away with clinical medicine, physiotherapy or any other known aid in diagnosis or management. Ministering to a mind diseased, in Shakespeare's immortal words, calls for the highest degree of intelligence of which we humans are capable. A good cultural background, supplemented by reading books of this kind, will help materially to understand the patient who is off center and to restore him to a rightful place in society. This is a simple, practical and thoroughly enjoyable little handbook.

The Marihuana Problem

The Marihuana Problem in the City of New York. Sociological, Medical, Psychological and Pharmacological Studies. By the Mayor's Committee on Marihuana. With few illustrations. Pennsylvania: The Jaques Cattell Press, 1944. Pp. 220. Price $2.50.

The New York Academy of Medicine came to the conclusion that in view of the possibility that marihuana smoking might constitute an important social problem, it was time that a study of its effects be made based upon well-established evidence. This sociological study deals with the extent of marihuana smoking and the methods by which the drug is obtained; in what districts and among what races, classes or types of persons the use is most prevalent; whether certain social conditions are factors in its use; and what relation there is between its use and criminal or antisocial acts. The clinical study offers by means of controlled experiments the physiological and psychological effects of marihuana on different types of persons; the question as to whether it causes physical or mental deterioration; and its possible therapeutic effects in the treatment of disease or other drug addictions.

Electrocardiography

A Primer of Electrocardiography. By GEORGE BURCH, M.D., F.A.C.P., associate professor of medicine, and TRAVIS WINSOR, M.D., instructor of Medicine, Tulane University School of Medicine. With 235 illustrations. Philadelphia: Lea & Febiger, 1945. Pp. 215. Price $3.50.

This primer enables the student who is unfamiliar with the subject to obtain a working knowledge of electrocardiography procedure which is vital in everyday practice. Although dogmatic, it offers a clear foundation upon which to build the practical knowledge of electrocardiography before interpretation is attempted. No typical electrocardiograms are presented, but the diagrammatic presentations suffice for the diligent student. The book is an invaluable scientific introduction to the subject for the serious minded student and physician.

Psychoanalysis

Yearbook of Psychoanalysis. SANDOR LORAND, M.D., managing editor. Written in collaboration with twenty additional physicians. Volume I. New York: International Universities Press, Inc., 1945. Pp. 370.

This new venture embodying psychoanalysis is of interest to physicians, anthropologists and laymen who have no access to psychoanalytic publications. Volume I contains papers on dream interpretation, the normal mind, sublimation, self preservation, sleep disorders, war neurosis, day dream identification and psychosomatic diagnosis.

"The total dose of penicillin should be not less than 2.4 million units..." Goodwin, Mary Stewart, and Moore, Joseph Earle: Penicillin in Prevention of Prenatal Syphilis, J.A.M.A. 130:11, 688-694 (Mar. 16) 1946

"...one is justified in using 2.4 million units of penicillin as the dosage of choice. This total dosage was adopted by the Army and Navy." Schoch, Arthur G., and Alexander, Lee J.: Treatment of Early Syphilis with Penicillin, J.A.M.A. 130:11, 696-698 (Mar. 16) 1946

"...all patients with subacute bacterial endocarditis should receive at least 500,000 units a day for at least five weeks." Flippin, Harrison F., Mayock, Robert L., Murphy, Franklin D., and Wolferth, Charles C.: Penicillin in the Treatment of Subacute Bacterial Endocarditis, J.A.M.A. 129:13, 841-843 (Nov. 24) 1945

"Eight hundred and forty thousand Oxford units was administered to each patient under a five day plan of treatment..." Hodgkinson, C. P., and Nelson, Reuben E.: Penicillin Treatment of Acute Puerperal Mastitis, J.A.M.A. 129:4, 269-270 (Sept. 22) 1945

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First Army Artificial Limb Shop in the Philippines

Plans for the establishment of an artificial limb shop to fill the needs of the United States Army's Filipino amputees will get under way on April 15th when an orthopedic team of four officers, sixteen enlisted personnel, and two civilians will leave for the Philippines to set up the installation, according to a release from the Office of the Surgeon General. This limb shop, the first Army establishment of this type to be organized in the Philippines, will provide facilities for training Filipino personnel in the manufacture of artificial limbs, in addition to supplying amputees' requirements. When the Filipinos are considered sufficiently skilled, the shop will be turned over to them for operation.

Captain John J. Keys, former chief of the Orthopedic Limb Shop at McCloskey General Hospital, Temple, Texas, will head the team, assisted by First Lieutenant Edward S. Brown, Bushnell General Hospital; First Lieutenant Carol Stange, physiotherapist from McGuire General Hospital; and First Lieutenant Roger S. Noden, amputee from England General Hospital. The fifteen enlisted men and one enlisted WAC were selected from a number of General Hospitals, including McGuire, England, McCloskey, Percy Jones, Bushnell, Lawson, and Walter Reed. Welch Convalescent Hospital and England General Hospital provided the two civilian occupational therapists.

The new artificial limb center will be located at Manaluyong, about five and one-half miles from the heart of Manila. The two-fold purpose of establishing an organized artificial limb shop and instructing the Filipinos in the technique of limb construction will be accomplished in approximately six months, Captain Keys said.

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No Prescription Needed for Atabrine

Atabrine, widely used for treatment of malaria by the armed forces, may now be purchased without a doctor's prescription in retail drug stores throughout the country, according to a ruling by the Food and Drug Administration, Washington, D.C.

The drug store packages of atabrine will contain fifteen tablets, sufficient for one course of treatment. Meanwhile, the present label, which reads "To be dispensed only by or on the prescription of a physician," may be disregarded.

Since thousands of returned soldiers may suffer relapses of vivax malaria, the Winthrop Chemical Company, Inc., in whose laboratories atabrine is manufactured, is making every effort to obtain complete national distribution of the drug, which will also be useful as a suppressive in highly endemic malaria localities in this country. While the new labeling is indicative of the safety of atabrine, it should not be interpreted as meaning that laymen are qualified to treat malaria.

Action of the Food and Drug Administration followed a report of the board for the coordination of malaria studies of the National Research Council, which, after intensive study, stated that effective suppression of malaria could be accomplished for longer periods of time by the proper use of atabrine, and that available evidence indicated that this end may be achieved without danger to the individual.

Experience in the past two years had, the report stated, demonstrated conclusively that atabrine when properly administered was fully as effective as quinine in the termination of the acute attack and was safer than quinine.

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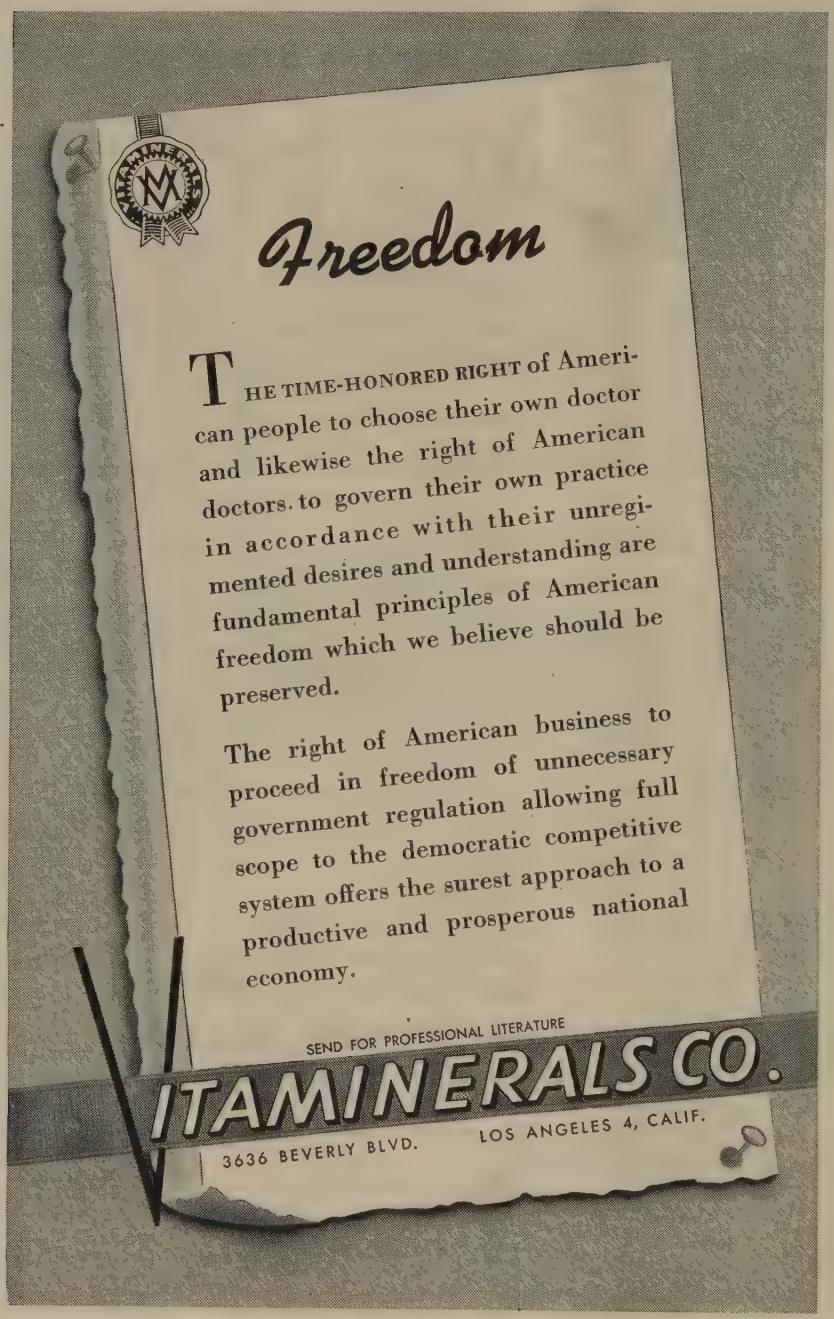
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Fellowships for one year of graduate study in health education, leading to a master's degree in public health, are being offered to qualified men and women by the U.S. Public Health Service through funds made available by the National Foundation for Infantile Paralysis.

These fellowships provide a year's study in public health education in an accredited school of public health. This training includes an academic year of eight or nine months and three months of supervised field experience in community health education. The courses include: public health administration, epidemiology, public health and school health education, problems in health education, community organization, and information techniques. A stipend of $100 a month is provided for the entire period of academic and field training, tuition, and travel expenses for field experience.

Fellowships are effective for the academic year starting in the fall of 1946. Men and women, in sound health, between the ages of twenty-two and forty, who are citizens of the United States are eligible to make application. They must also meet the entrance requirements of the School of Public Health of their choice, and in addition to a bachelor's degree from a recognized college or university, courses in the biological and/or physical sciences, sociology, and education may be required. Training in public speaking, journalism and psychology and work experience in a related field are desirable.

Further information and application forms may be obtained from the Surgeon General, U.S. Public Health Service, Washington 25, D.C.

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United Medical Service, Inc., 370 Lexington Avenue, New York, N.Y., announces that it has liberalized its enrollment regulations for persons desiring surgical and medical care in hospitals and has made provision to pay for minor surgical operations performed in a doctor's office. Small employed groups and individuals not affiliated with groups may now subscribe to U.M.S. under regulations similar to those in New York's Blue Cross Plan, Associated Hospital Service of New York.

According to Rowland H. George, president of the Service, the current regulations affect some three hundred thousand persons, heretofore unable to obtain maternity benefits under United Medical Service. These individuals, originally enrolled in the Blue Cross hospitalization plan in groups, subsequently left their places of employment and continued their subscriptions on a non-group basis. Under the United Medical Service family contract they may now obtain surgical indemnity in hospitals including maternity benefits, ordinarily granted only to those who enroll directly through groups. The provision covering indemnity for minor surgical operations performed in a doctor's office, was adopted by the Board of Directors as a result of the current shortage of hospital accommodations.

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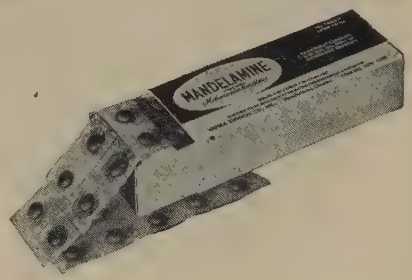

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Army Program Prevents Importing of Disease

There is little or no risk of introducing foreign disease into the United States through returning military personnel from abroad, according to an announcement by the Office of the Surgeon General, which pointed out that the most careful estimates anticipate only moderate danger in a few cases. This conclusion was reached after a world-wide survey by the Interdepartmental Quarantine Commission.

To date no acute outbreak or secondary spread of an imported disease has been reported.

The 440,000 hospitalizations for malaria reported among Army personnel during the war fall short of pessimistic predictions for what has proved to be the commonest infectious disease of troops abroad.

The special danger of cholera, smallpox, plague, epidemic typhus, and yellow fever is a matter of historical record. Immunizations were employed against all these diseases by the Armed Forces along with water purification, environmental sanitation, and disinfestation and insect control. This preventive medicine program was exercised even under combat conditions.

The risk of importing disease from abroad has been less in some respects than in prewar traffic and the credit for these results has been attributed to the modern preventive medicine program of the Army and Navy. Cases of exotic disease did occur, but extensive investigation of hazards and the application of preventive and corrective measures were effective in reducing risks.

Par-Pen

Par-Pen, a new penicillin-vasoconstrictor combination, has been brought out by the Smith, Kline and French Laboratories, Philadelphia. The Par-Pen package consists of penicillin in a dry state, and an isotonic aqueous solution of paredrine hydrobromide—*each in a separate container*. The pharmacist has only to mix the two, and the patient receives Par-Pen freshly prepared and with the pencillin at full therapeutic potency. When prepared by the pharmacist as directed, Par-Pen will contain at least five hundred Oxford units per cc.—the accepted concentration for use in local therapy—even when kept at room temperature (not above 75° F.), for one week after it is made up, an adequate period of therapy for the average patient. It will also contain paredrine hydrobromide, one percent, in a specially buffered isotonic aqueous solution, preserved with sodium ethylmercurithiosalicylate, 1:50,000.

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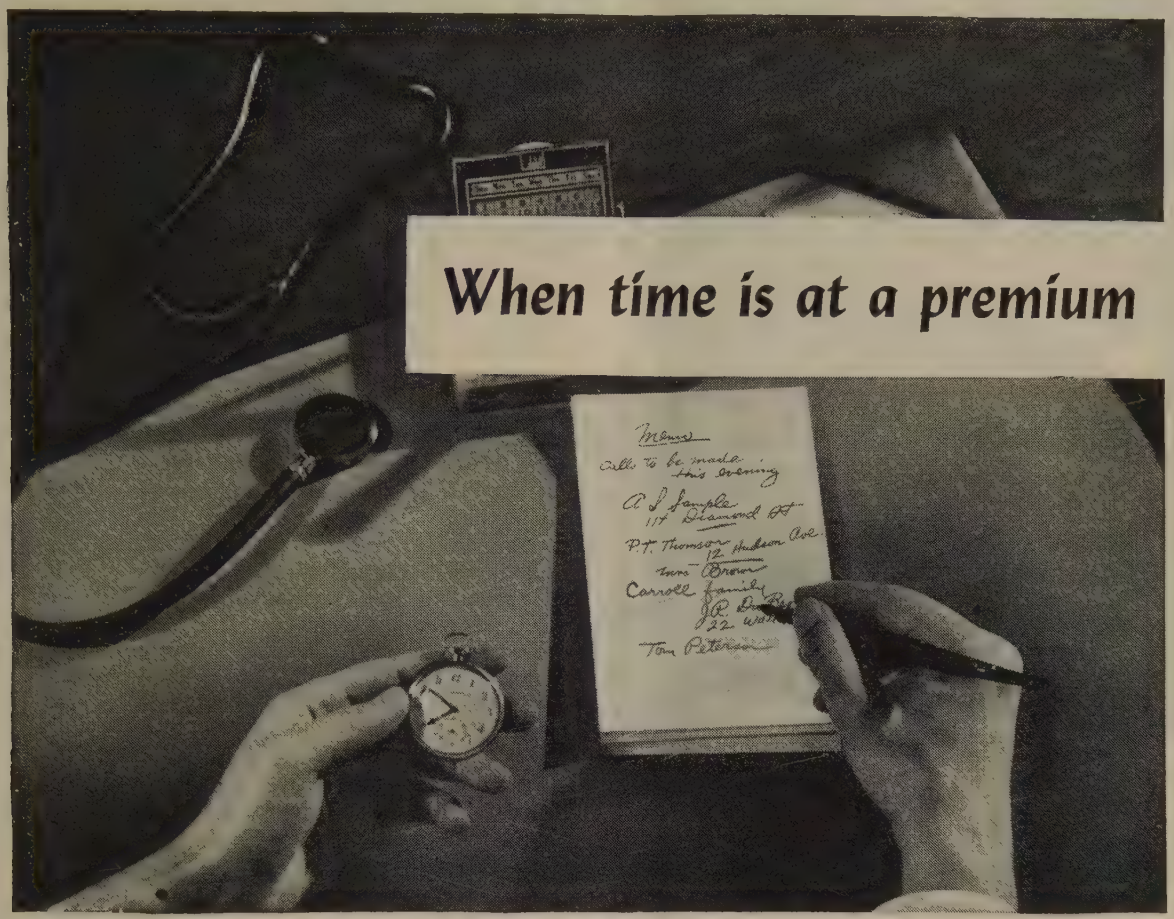

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Clinical Biochemistry in Cancer

Dr. Alexander B. Gutman, of the department of medicine, College of Physicians and Surgeons, Columbia University, in a paper read before the Biological Division of the American Chemical Society at Atlantic City, N.J., said that until recently the diagnosis of various forms of human cancer could be made only by clinical and x ray studies. These usually suffice to recognize many types of cancer but sometimes diagnosis was difficult or impossible so that proper treatment could not be instituted in time. In recent years chemical methods for the recognition of certain tumors have been developed and these have proved useful in diagnosis and as a guide to treatment.

The most striking advances have been made in connection with cancer of the prostate gland, one of the most common and distressing of all forms of human cancer. It was shown in the laboratories of the Department of Medicine, Columbia University College of Physicians and Surgeons, that spread of prostatic cancer is accompanied by the appearance in the blood of an enzyme called acid phosphatase, a substance secreted by the cells of the prostate gland. Methods were developed for the detection of traces of acid phosphatase in the blood and these were applied to patients. These chemical methods, which are now in general use, have greatly facilitated diagnosis of this form of cancer.

Dr. Huggins, of Chicago, he said, had used these methods to develop a new treatment of prostatic cancer by castration or by the injection of female sex hormones. Such treatment often results in marked improvement, including decrease in the size of the tumor, gain in weight and strength, lessening of anemia and other indications of arrest of tumor growth. Unfortunately the improvement usually lasts only a few years whereupon the tumor recurs. Studies are now being made to investigate such recurrences.

These advances indicate that cancer is not necessarily due to an intrinsic change in the cell but may be (at least in some forms) the result of stimulation of hormones which are subject to some measure of control by other hormones. This new point of view is now being extended to forms of cancer other than those of the prostate gland and there are indications that new methods of treatment for certain other tumors may soon be available. Chemical methods have also been developed for detection of osteogenic sarcoma and multiple myeloma. These have not as yet led to any new forms of treatment.

Mental Hygiene Legislation

Dr. George S. Stevenson, medical director of the National Committee for Mental Hygiene, in his annual report to the Committee, said that the introduction of a bill in Congress for a National Institute of Mental Health was the most significant forward step in the mental hygiene field during the past year. This legislation, he said, would for the first time "provide for research, training and demonstration of preventive service in a way approaching the needs of the field." The National Committee for Mental Hygiene had a hand in the framing of this legislation and has given it the fullest support possible. Three other matters of mental hygiene legislation were mentioned by Dr. Stevenson: the Kilgore-Magnuson Bill for a research foundation, the Hill-Burton Bill for hospital construction, and the Child Welfare Bill under which preventive activities are made possible.

Summary and Conclusions

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1. Eisfelder, H. W.: J. Clin. Endocrinol. 11:628, 1942.

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Critique

Rural Medical Care

For the past two years some three hundred families in six counties of Western New York have participated in a combined medical, surgical, and hospital plan, sponsored by Farm Security Administration, and developed in cooperation with officials of the Western New York Medical Plan and the Hospital Service Corporation of that area.

The plan provides ward service for each subscriber and dependent for thirty days in each contract year; thereafter one-third the regular charges must be paid. Pre-existing conditions and waiting periods for maternity have been waived. Surgical care; home, office, and hospital calls; maternity care and delivery; medical treatment; laboratory services, even for non-hospitalized cases; diagnostic or therapeutic x ray; anesthesia; and eye examinations, but not glasses, are included.

All waiting periods have been eliminated for elective surgery, tonsillectomies, and other causes. But maximum medical benefits per contract year are limited to $200 for individual contract cases, $300 for subscriber and spouse, and $400 for families. Single members pay $5.40 per year for hospital and $18 for medical care, or a total of $23.40. Service to couples is $9.90 for hospitals, $27 for medical care, a total of $36.90. Rates for families are $13.05, $36, and $49.05, respectively, a year.

Enrollment represented more than eighty percent of the local FSA case load of clients in the first year, and rose to ninety-six percent in one county the second year, when health committees were appointed among the participants. Committee members enroll new members in their areas and explain the program to families and to doctors who do not understand it. Doctors are prorated seventy percent of their charges and are happy about this, as it represents more than they have been used to earning from the rural groups concerned.

During the first year of operation hospitalization cost $5838 for cases requiring this, medical treatment $3180, surgical cases $3785, gynecological cases $350, maternity cases $1199—the total being $11,130. The six counties involved are Alleghany, Cattaraugus, Erie, Wyoming, Genesee, and Orleans. This successful experiment is merely another variant of patterns which can provide adequate medical care at rates rural folk can pay.

THE CRITIC

Self-Fed Dairy Cows

Bulletin 289 of the University of Illinois Agricultural Experiment Station, by W. B. Nevens (1927), said it was not economical to let dairy cows eat as they wished, because they overate both maintenance and milk-production requirements. This is not surprising because a dairy cow is a strange, distorted, biological machine for the production of milk invented and prefected by geneticists, highly artificial, and bearing little or no relation to the natural animal. Self-fed cows usually consumed excess net energy or digestible true protein, or both; for a short period following calving, they ate too little, however. Their preferences in food changed suddenly and their whims were astonishing for animals so sedate and docile. Self-feeding did very well for fat-

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B. A. Goodman, *Asst. Secretary*

tening animals for market, but for dairy purposes the cow's selection of nutrients was inconsistent, and some cows actually went on roughage drunks!

Rats and mice do better (*American Journal of Physiology*, December 1, 1921, p. 311). Wise choice of food is guided by what is commonly called appetite. The very young exhibit this in a natural environment, and wild animals choose adequate diets for themselves. Osborne and Mendel found that self-fed laboratory animals prospered. When rats and mice were offered two synthetic food mixtures differing only in the type or amount of a single constituent, they ate selectively—for instance high-protein instead of low-protein rations, and better biological proteins instead of poor ones. They preferred casein to zein, the complete to the incomplete protein, too. If offered both, they ate enough casein to make up zein's deficiencies. They also tended to take foods that contained necessary vitamins instead of those which did not. Offered the opportunity for wide selective dietetic variations, older rats took a twenty to twenty-five percent protein level, younger ones twelve to nineteen percent, though none ran to excessively high protein. They proved able to supplement corn with meat as needed. Even when offered synthetic foods, essentially alike in appearance and palatability, rats and mice could choose with nutrient optimum. Osborne and Mendel wrote: "The desire of a young animal for food is something more than the mere satisfaction of calorific needs. The demands made by the growth impulse must be met by a food of the proper chemical composition."

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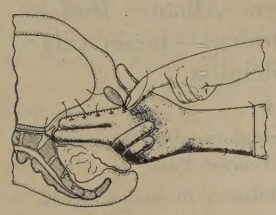
The physiology and anatomy of reproduction is reviewed in animated drawings and microphotography. Where possible, human specimens have been used, particularly in the development of the follicle. Also included, is an actual shot of cell division in the monkey. This part also contains diagrams, charts and graphs depicting the progress throughout the cycle, of the vaginal glycogen curve, the mid vagina pH curve, the urinary estrogen and pregnandiol analysis, vaginal smears and the cyclic changes in the ovary and endometrium. Following this, is a study of human semen and spermatozoa, with up-to-date technical methods of analysis, study of the normal semen and effect of time and temperature and other factors of recent development. A discussion of methods for the control of conception covers in detail impractical and unsatisfactory types as well as the more efficient methods.

The last section is devoted to a pictorial elaboration of laboratory methods for the testing and standardization of materials, covering such problems as dispersibility, adhesion, surface tension, viscosity, spermicidal time and tolerability to the tissues—with biopsy specimens before and after application and similar illustrations for the glycogen stain and the bacterial flora.

According to the American Pharmaceutical Manufacturers' Association, arrangements can be made to have "Studies in Human Fertility" shown, without charge, to any size audience, providing it is an accredited medical group. Requests should be addressed to the Film Division, Ortho Pharmaceutical Corporation, Linden, New Jersey.



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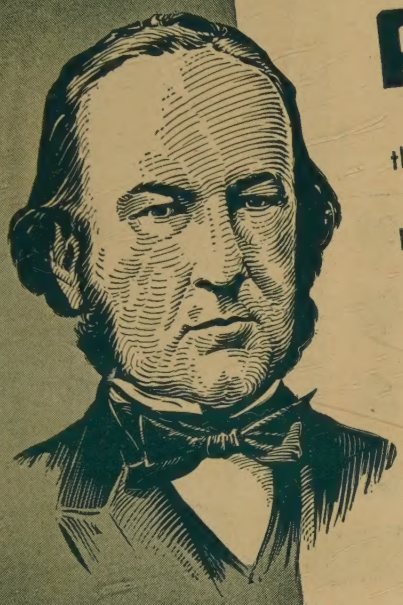

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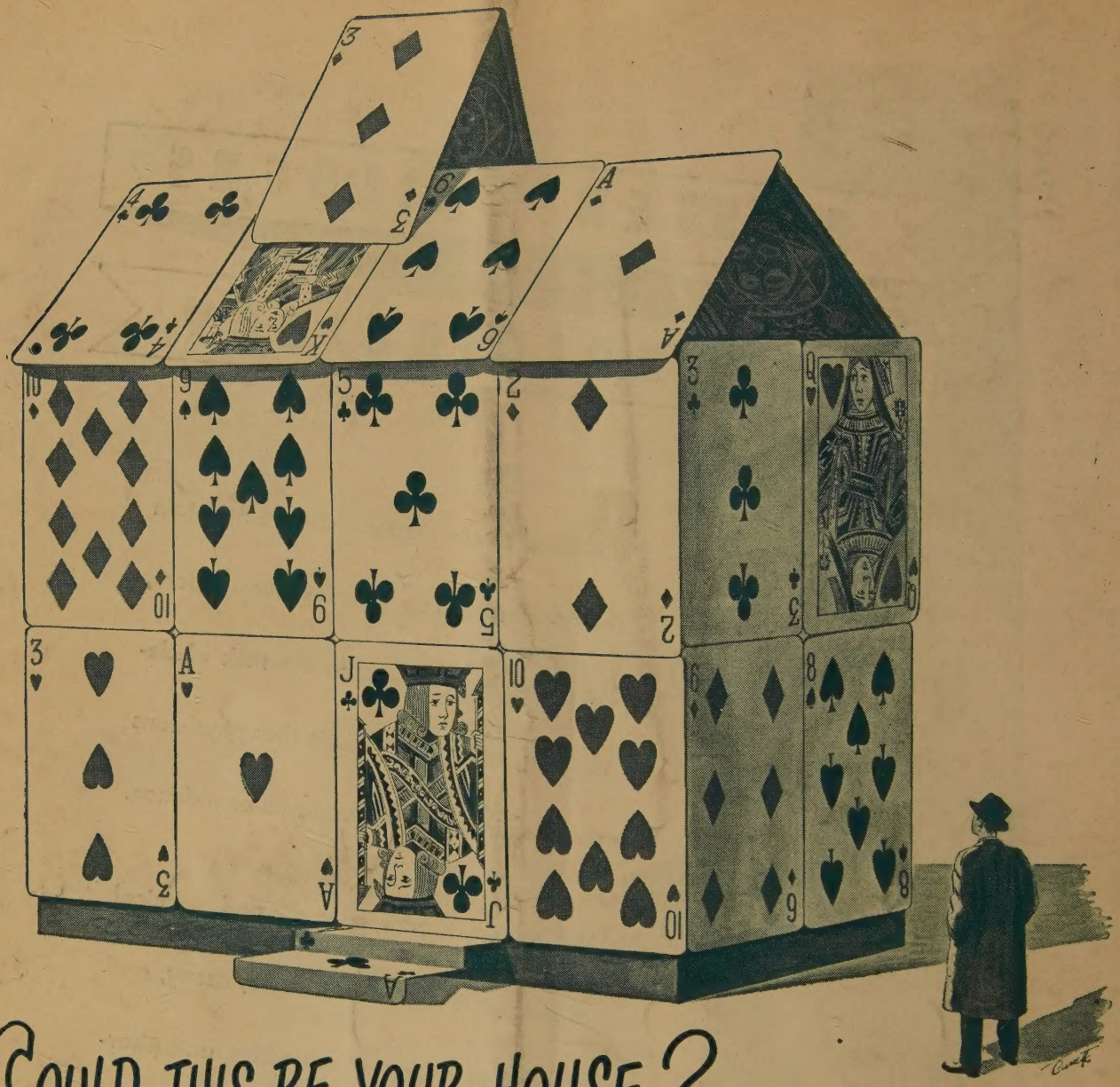

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